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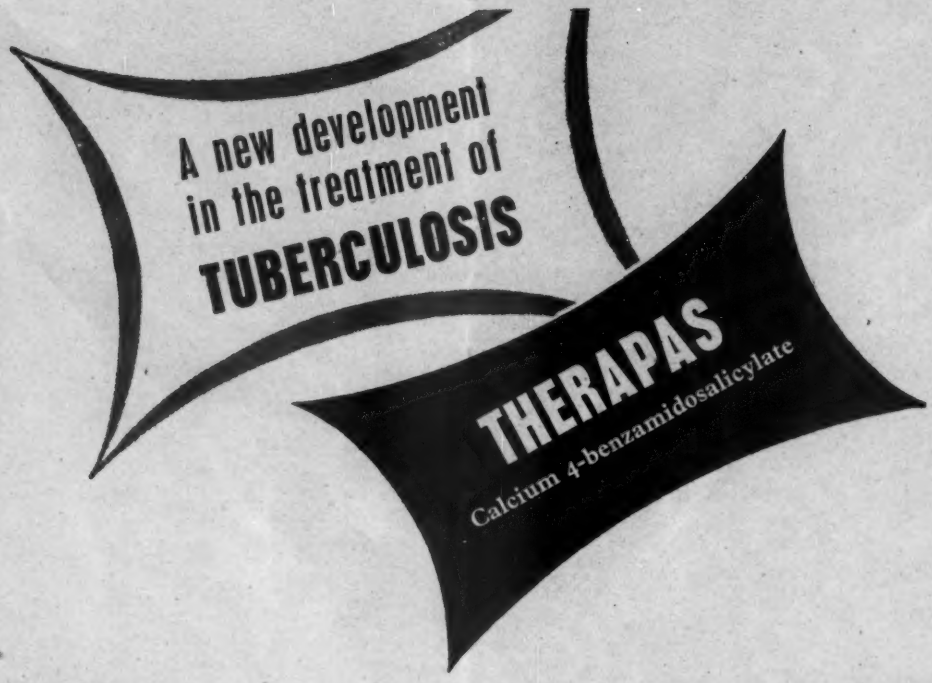

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(1) Bavin, E. M. & James, B., *J. Pharmacy & Pharmacol.*, 1953, 5, 849.

(2) Schonholzer, G., Lauener, H. & Hurni, H. *Schweiz. Med. Wschr.*, 1955, 85, 222.

(3) Gow, J.C., *Brit. Med. J.*, 1953, 1, 95.

(4) Ross, J.C., Gow, J.C. & St. Hill, C.A., *Brit. Med. J.*, 1953, 1, 901.

(5) Ross, J.C., Gow, J.C. & St. Hill, C.A., *Lancet*, 1955, 1, 116.

(6) Gibson, M.O.J. and Nagley, M.M., *In press.*

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CONTENTS

PAGE

SPECIAL ARTICLES

Causes of Failure in Medico-Social Experiments. By J. L. Burn, M.D., D.HY., D.P.H. 149
Lancashire's Inheritance. By R. W. Elliott, M.D., M.SC., D.P.H. 152
Physical and Psychological Aspects of Borstal Training. By D. A. Ogden, L.M.S.S.A. 157

BOOK REVIEW

Education and Health of the Partia'ly Seeing Child (W. Hathaway) .. 159

SOCIETY OF MEDICAL OFFICERS OF HEALTH

Provincial Meeting of Council 159
May Ordinary Meeting 160

PAGE

June Ordinary Meeting 160
Home Counties Branch 161
Midland Branch 161
Northern Branch 161
Welsh Branch 162
Yorkshire Branch 163
County District Group 163
Maternity & Child Welfare Group 165
School Health Service Group 164
S.H.S. Midland Sub-Group 166
Tuberculosis Group 166
Dental Officers' Group 166
North-Western M. & C.W. and S.H.S. Sub-Groups 168

CAUSES OF FAILURE IN MEDICO-SOCIAL EXPERIMENTS*

By J. L. Burn, M.D., D.HY., D.P.H.

Medical Officer of Health, City of Salford

Prof. Major Greenwood used to urge students to undertake investigations and to "ask Nature questions" for, as he said, "Nature will always answer correctly and completely." It is perfectly true, for there is law and order in the universe, that Nature far from being so apparently unhelpful in our investigations does answer one's questions. Later I discovered the snag—she answers the *actual* questions which are put to her, not the questions we *think* we are putting to her. It is most difficult to ask Nature a clear question which will give us the unique answer we want, as I learnt in an investigation which sought to relate the nutritional state of schoolchildren with their ability to suspend their own weight. The aim was to provide an objective measurement of nutrition in giving a result in seconds thus obviating the subjective clinical impressions which vary so much between doctor and doctor and in time. Though Nature answered our question, it included psychological factors such as determination which enabled some children to hang on to the bar longer than others who might have had superior physical resources. Again children whose nutritional state was slightly subnormal clinically did surprisingly well on the test, due partly perhaps to their lack of excessive weight; whilst children of obviously excellent nutrition often did badly. No consistent results could be obtained in Salford.

Vitamin Experiments

A mistake is to argue that the behaviour of animals, even susceptible animals, applies to the human. An example was the study, hitherto unpublished, of the effect of giving vitamin A to children suffering from defective hearing and measuring any subsequent change carefully by the pure tone audiometer. I had read how Sir Edward Mellanby (*Journal of Physiology*, 1938) investigated the changes in the labyrinth capsules of young dogs fed for some months on a diet deficient in vitamin A and rich in cereals. He noticed a marked deterioration in hearing, degeneration of the cochlear nerve, overgrowth of bone in the modiolus together with a serous labyrinthitis. It seemed therefore worth while to try the effect of vitamin A on human subjects. I was able to secure amongst 80 schoolchildren suffering from defective hearing carefully measured by the individual pure tone audiometer a control group and a treatment group—40 children in each group. To the treatment group a capsule of vitamin A, containing 7,000 I.U. was given daily for 40 days. The control group received a capsule containing peanut oil, similar in size and shape to the vitamin capsule. Neither parent, teacher, child, nor audiometer technician knew to which group the child belonged. After the experimental period, individual pure tone tests showed that both groups had gained very slightly; in fact, to quote the air conduction figures, the control group had made a gain of 3·7 decibels as compared with 2·7 in the vitamin group. Thanks to the tiresome technique of matched controls it was apparent that there was no significant result. Later a daily double dose of vitamin A likewise showed no benefit.

The results surprised me but it proved to be yet another example of the folly of arguing that animal experiments apply also to humans. The experiment was a failure but it taught me a useful lesson—Nature no doubt answered Mellanby's question in dogs, but with children at any rate her answer to the question I put was not what I expected. American investigators produced objective evidence later in the form of audiograms that vitamin A was effective but nothing more has been heard of this and equal claims were made on behalf of several other vitamins and the claims have apparently been discarded.

A big disappointment was the multi-vitamin experiment which was carried out in the war years 1942–43 under the guidance and with the great help of Drs. Magee and Bransby.† Excellent multi-vitamin capsules were used, containing vitamin A, B, B_2, nicotinamide, C and D. It was a current belief that many of the vitamins, particularly of the B group, improved a child's performance in the I.Q. test. The results were complete in only comparatively few of the children. The number was sufficient to show some interesting aspects of these performance tests. From this and other work it was apparent that I.Q.s seemed to vary in the different periods of a child's life despite the teaching of Cyril Burt on which we were brought up; clear evidence now exists that individual children have "spurts," and if the test is done on one of their off days then the result will be misleading. Different investigators get different results; the ability to get the best out of children in all forms of tests is a very real and rare gift. Another factor which affects

* Address to the North-Western Branch, Society of M.O.H., December 10th, 1954.

† Bransby, E. R., Burn, J. L., Magee, H. E., & MacKecknie, D. M. (1946). *Brit. med. J.*, **1**, 193.

these performance tests is that some children are off colour, or indeed ill, at the time of the test, although we may not recognise it, and their performance on any test suffers.

This work again was carefully done but the children showed no benefit, other than the controls, either in height or weight, in incidence of illness or in acuity of hearing as decided by the audiometer. The experiment was a failure only in the sense that if the truth had been otherwise, and the giving of vitamins in this way helped the children, it would have been easy to have effected a dramatic improvement in the health of British children by the use of a few tons of vitamins, but health does not lie that way. I confess I could not then, and still do not, understand these results, for the Salford children concerned had been and were living under poor social, economic and environmental conditions, they had been born and brought up during the period of industrial depression when their diet was surely defective in the years before the war and none too good in the early years of the war, but there the results are. Fruit was and is so expensive and I have never known a region such as the north-west where so little fruit and vegetables, excepting potatoes, are consumed. A parallel investigation was carried out at Stoke-on-Trent and here may I say it is always wise to duplicate an experiment, using different workers in a different area, but the results with one very small exception confirmed the results of the Salford investigation.

Home v. Camp School

Of very great interest to me was the camp school experiment in war-time.* Here over 100 Salford boys, taken as part of an evacuation party, were taken from the grime and gloom of city slums to Whiteacre Camp near Whalley where they lived under excellent health and hygienic conditions. The diet was far superior to their home diet. Fortunately, a control group of children roughly comparable remaining in the city was studied. There was no excessive occurrence of infectious disease in either group. There was a resident nurse at the camp to watch over every child. The children stayed in the camp from a year to 18 months. The children in the camp school failed to show any addition in height and weight over the control group, and a similar result was obtained (with one exception) in several other camp schools. I could not find a reason, apart from the obvious one that the children were away from home, their contact with their parents was very infrequent or in some cases nil, and the work of John Bowlby has since shown that very young children at any rate are affected by separation from their mother and family. I had expected quite a different result and had already put forward to my authority plans for the retention of the camp school after the war in order to bring up children on the most hygienic lines. How wrong I was !

Another mistake is that of excessive reliance on questionnaires and their replies. Some replies astound me, and it is obvious that questions should be clearly worded. Replies to recent questionnaires show that all do not return their answers on a comparable basis. I have learned that to do this work properly a visit should be made on any important matter to all the recipients of the questionnaire in order to ensure that there is a common basis on which replies can be assessed. I recall being disappointed in the investigation of infectious diseases in the completion of most extensive questionnaires. Many were so comprehensive that it seemed inevitable that significant facts would be revealed but nothing came out of them.

Rehabilitation of Problem Families

I have been much sobered by the story of family X. Mr. X was a deserter. He came back home—I thought it was with the praiseworthy aim of helping his wife with their six children. The mother married when she was pregnant at 19. She had had six children and a few abortions and miscarriages before she was 29 and made no arrangements whatsoever for her last confinement. I blamed the wife as she was slovenly and slothful ; she spent £2 a week on cigarettes and I was over-impressed with the husband's ability to do house jobs. With that " black or white " judgment which is all too common in social work I regarded her as the real cause of the family breakdown and the immediate subsequent happenings seemed to fit in with previous impressions—another danger we must carefully watch. A good relationship was established with the Family Service Unit workers. The standard of living improved dramatically—cleaner sheets and bedding, better-kept children and all the odd jobs in the house done. I persuaded my authority to rehouse the family in a dwelling which, though sub-standard, was much superior to their previous hovel. I used to quote this case (though of course not by name) to students and others as evidence of a real success in rehabilitation. On looking back, the evidence was apparently misleading and I for one took far too superficial a view. They took pride in having family parties and photographs and showed signs of being a happy united family ; they actually issued a private Christmas card which I showed to other people as novel evidence of the cure of their social problem.

But we must see problems steadily and whole over a long period of years. The end result in this instance was catastrophic ; after four years the family completely broke down. At a recent Court case the father said that he had spent £150 in inserting advertisements in the " Agony " column of the local evening papers asking for his wife to return. At least five children are in care of the local authority at great expense. Here I failed to see, diagnose and appreciate the underlying mental illness in the father, although he appeared superficially to be a stable man and a clever craftsman. He had been a persistent " nagger " with obsessive tendencies. He had complete inability to hold down a job, his desertion from the army was merely evidence of his instability. I have been acquainted with the work done by workers of the Family Service Unit for 12 years and I am more than ever convinced that the methods they use are the best, if not the only, approach in this work. Nothing I say in any way is anything but the highest praise of their work and it can be argued that even in this failure case, the efforts at rehabilitation kept the family together for a number of years, but it is most important to recognise mental and " morale " disease in these families. I think a new science is required—the science of socio-medicine—which will take a comprehensive view of all aspects of the health of the family. It will, therefore, include the sciences of psychology, sociology as well as medicine. These families require socio-medical diagnosis in their problems which may be more difficult (and important) than those in clinical medicine. Prominent in this science will be the recognition of psychological and spiritual factors, the lack of which leads to family breakdown. Such a science will also include prevention and cure of these families and if cure is not possible some form of rehabilitation or at least the stopping of further deterioration.

Housing

Another failure has been in the rehousing of families for what may be termed mental health reasons. Parents have come to me in emotional states begging for rehousing, blaming their obviously poor housing accommodation for psychological disturbances. How carefully one must assess these cases in order to be just, for I can recall two families in particular in which rehousing made not a whit of difference. There was an underlying mental and emotional instability and infidelity which was not cured but rather worsened on rehousing. Patients in the families really needed psychological and mental treatment as well as the provision of a new roof over their heads.

Sometimes rehousing efforts seem to be attended with failure, but one should not take first impressions and disappointments as the truth. A recent questionnaire on the

* J. L. BURN. (1947). " Home and Social Environmental Factors and the Health of the School Child." *J. Roy. Inst. Publ. Health & Hyg.*, October.

BRANSBY, E. R. (1944). *Monthly Bull. Min. of Health & P.H.L.S.*, **3**, 212.

tenants of a new housing estate, built at huge cost of money and materials, of over 158 families revealed deep and widespread discontent, for example, half of the tenants wished to come back nearer to the city. Does this mean a failure of the social experiment? Not necessarily. We must look ahead, beyond the present generation, to the children and the children's children who will benefit. Experience teaches that we must discount complaints which seem automatically to follow rehousing of Council tenants.

M.M.R. Survey of the Population

The recent large-scale M.M.R. Survey in Salford was experimental and it is salutary to recount the mistakes made. Firstly, it is so important to start right, to give complete power to some competent officer and for him to be guided (but not ruled) by councils and committees. The survey was planned to last for too long a time and this inevitably brought delay and set-back due to the need to close down units for holidays. Six weeks are probably the best length of a survey, provided of course that sufficient units can be brought into an area to enable a substantial proportion of the population to be *x*-rayed. I made mistakes in allowing the schoolchildren to be *x*-rayed at too early a time in the survey. I argued that in an experiment of this kind it was better to have it during the warmest month of the year so that schoolchildren, or their parents, would not complain of the cold when undressing took place. Again I yielded to pressure in allowing the survey to be diverted to industry whereas I should have gone all out in *x*-raying those sections of the public who had not had *x*-ray facilities—the elderly person and in particular the housewife. After all it is as easy to arrange for the *x*-ray of schoolchildren and factory workers towards the end of a survey as towards the beginning.

At that time we were on the crest of the wave of public enthusiasm which should have been used to better purpose. There was almost until the end of the survey little attempt to make the service attractive to the general public and only in one unit was any attempt made to organise true "family" sessions where all members of the family could be *x*-rayed together. Arrangements must be made that are very convenient to family doctors as well as to volunteers. Doctors should be able to refer patients to any unit at any time. They were asked, however, to send their patients to a centrally situated unit and to submit lists of their patients to the survey central office who would see that invitations were issued. This wasted time and lost impetus. The arrangements for expectant mothers should have been made as convenient as possible. Although we provided transport from clinics to the special M.M.R. unit it was a cumbersome procedure. An M.M.R. unit should have been provided at the clinic. A mistake was made in not going all out for the vulnerable group—the groups who had not been *x*-rayed before—expectant mothers, and proprietors and staffs of small businesses, especially those concerned with the preparation of food, and with dangerous trades.

Hospital Care of Children

Nearly 20 years ago I was medical superintendent of a fever hospital of 100 beds and the question came up of whether to discontinue the twice-weekly visiting session by parents. I remember being impressed by the crying of the children when their parents left the windows of the wards. Matron was not slow to point out the rise in temperature in certain children after parental visits and apparent upsets and I yielded to the suggestion that visiting to the wards be discontinued. I was rewarded with the sight of rows of children who didn't cry, were nice and quietly apathetic. I do not now need the recent knowledge gained about maternal deprivation to tell me that the decision to discontinue visiting was mistaken, that it was better to accept the children's tears as a healthy reaction of the child. Here the failure was to see the real cause of the unhappiness.

A great disappointment in my work concerned a handicapped boy of 16 in whose case I had taken a great interest and provided as many services as I possibly could. At school-leaving age the parent was asked to take charge of the boy; to my surprise the mother said, "No, you have looked after him so long you must continue to care for him." The mother had lost not only her knack of caring for the child but also our exclusive care for him had perhaps lessened the affection and certainly the interest of the mother for her son. Since that case my policy has been always to help the child through the parent, to do less directly for the child, and in every way to preserve the parents' rights, responsibilities—and duties!

Provision of Nurseries

Again many years ago, I thought how nice it was to keep children clean and under the best possible hygienic conditions, far better than their homes which were "obviously" so unsuitable. I seemed to have the idea that parents were the worst possible people to bring up children. One of the ways Dame Nature has taught me that home is best is by the repeated infections which have plagued our nurseries in spite of every care. The nursery can play a useful part in helping family life by tiding the family over crises such as illness of the mother, but as a substitute for family life it is a great mistake. This is commonplace nowadays but for the benefit of the younger members it was not commonplace 20 or even 10 years ago. The existence of nursery provisions may now harm family life by encouraging unnecessary going out to work, with all its disadvantages and even dangers.

The failure of some very stringent precautions to prevent the spread of infection which took a great deal of thought and splendid work by the staff prompted me to try the experiment of dividing our eight nurseries into two groups, one group using a powerful disinfectant and the other group using no disinfectant whatsoever. It has been interesting during the last four years to watch the total number of infections, carefully tabulated and pictorially represented on charts by the staff. Sometimes the advantage has been in favour of the disinfectant nursery and then an incident of infection would come along and the advantage now lies with the non-disinfectant nurseries. This, to my mind, shows that rather than encourage a false sense of security with the staff using disinfectant in an ineffective way, a competent staff with high morale and without the advantage of any disinfectant whatsoever can prevent the spread of troublesome infections in a better way than the staff using the disinfectant. Perhaps the most valuable feature in the non-use of disinfectant is the practice of aseptic precautions —washing of hands thoroughly by staff and children.

Some "Legal" Failures

Some of the men who had V.D. had very little treatment due to the exigencies of war. Just after the war I was very impressed with the carelessness shown by mothers of some children suffering from congenital syphilis, in failing to bring up their children for treatment. Surely in this desperate situation when the baby's future mental and physical health was at stake, some method of compulsion for a recalcitrant mother was justified and I speak as one who by nature is strongly in favour of "voluntaryism." All our considerable efforts by every available means had failed to bring some syphilitic mothers and their babies to our clinic. I included, therefore, a clause with a measure of compulsion in a Parliamentary Bill in 1948; the clause was defeated in the Committee stage after strong representations on behalf of the Ministry of Health and an Association for Moral Hygiene. Whilst this was a failure, it was not a mistake. By a coincidence I heard of three syphilitic children, two of whom, though partially blind, defaulted from attendance at the eye infirmary. I have reason to believe that the parents of these children could and should have been compelled to bring the children for treatment.

Another more recent failure was that of compulsory vaccination against smallpox. Here I would make the point strongly that there was always opportunity by a proposed clause for the parent who did not believe in vaccination to "contract out." After all there is still an element of compulsion in public health legislation. There are certain diseases, amongst which I would now include V.D. and

smallpox, in which the individual has a responsibility to the community and the community has in some diseases a right to some protection backed up by law, always provided in the case of smallpox that the conscientious objection of the individual is scrupulously safeguarded. The clause, though approved in my area by both public and Council by an overwhelming majority (250 to 2), did not, due to a technical legal hitch, reach Parliament where there was no doubt a warm welcome awaiting it.

An interesting failure connected with legislature was the original Salford smokeless zone proposals some years ago, which included over 5,000 houses in three areas ; the Order, however, was not confirmed by the Minister. After the enquiry, I might well have gone to the Ministry officials and gone over the proposed Order and its application. I felt, however, that it was not right so to do, the enquiry having been concluded. Later on I discovered an interesting reason for the total rejection of our Order, it had not been noticed in official circles that our clause provided that the whole *or part* of the Order could be confirmed. I could not understand at the time why the Minister did not allow part of our scheme to be implemented, thus allowing valuable experience to be gained, even if the whole Order could not have been confirmed. I may say that the official reasons given, that of the shortage of smokeless fuel and of steel, were proved (as we had submitted at the enquiry) groundless. Locally there were mountains of coke ; suppliers did not know what to do with it. To crown our discomfiture, I attended a meeting of local authorities little more than a year after the rejection of our scheme when on behalf of the Minister it was pleaded, partly to get rid of the coke, that authorities should create more smokeless zones.

In smoke abatement a mistaken policy which I once encouraged was that of trying to do the industrialist's job for him, helping him to solve his technically difficult smoke problems by advice. Whilst of course we must be prepared to help the industrialist we should be quick to suggest that the remedy is entirely his responsibility, that if he lacks advice on complex technical problems he should secure it from qualified combustion engineers. A great deal of time of staff of the Health Department has been wasted and worse than wasted in giving detailed advice to firms. Our job is to administer the law, it is the responsibility of the industrialist to put his factory furnace and its chimney in order. This avoids the position of the staff being crestfallen when the very remedies which they have suggested have proved a failure and the moral and legal responsibility for the pollution has been compromised by well-meaning but ill-advised action.

On the other side, one meets failures in our health education work—the failure to get across to the public simple teaching of health. In one of our public toilets where we had provided free washing facilities by installation of electrical equipment for producing a stream of warm air over the hands, in order to avoid the cost and trouble of laundering of filthy towels, I asked a lorry driver what he thought of the new contraption. His reply showed a lack of appreciation of the proper way in which to wash hands; he said: " These newfangled devices are all very well. But if you want to get the dirt off, give me the old-fashioned towel ! "

A failure in the epidemiological field again and again has occurred when one has discovered a positive " first " case bacteriologically and has assumed that that person has been the carrier cause of the outbreak. On two occasions subsequent investigations on a comprehensive scale have shown that the first case was not the cause but a result of an infection consequent upon someone else's infection.

To recapitulate, let us ask Nature questions, but we must preserve a critical faculty and make allowance for imponderable and variable factors. Some of our present beliefs can be doubted ; on the other hand we must often doubt our very doubts. There is need for the intelligent design of investigations. Above all the danger of superficial judgment is ever-present, and there is need for watchful insight and time to think, and think again, in an endeavour to ascertain and assess the real factors involved.

LANCASHIRE'S INHERITANCE*

By R. W. ELLIOTT, M.D., M.SC., D.P.H.
Medical Officer of Health, County Borough of Bolton

In February, 1953, Dr. Metcalfe Brown reported to the Manchester Health Committee his observations on the Registrar-General's Statistical Review for 1950. This excellent report contains examples of the mortality rates for the South-East Lancashire conurbation and compares them with the rates for other areas. You will remember that medical officers of health in this Region were given the opportunity of seeing the report. I was very much impressed by the information given in the report and with the general conclusions reached by Dr. Metcalfe Brown as to the reasons for the higher mortality rates in South-East Lancashire when compared with any other part of the country except Tyneside.

The report deals with conditions as they exist at the present time and cites as being responsible for the heavy mortality such things as an adverse climate, reduced daylight, greater atmospheric pollution, extreme congestion of, and defects in, houses, together with the intense industrial development and heavier industrial occupations than in most other places. I have, for some time, been interested in the circumstances from which some of our present difficulties have arisen and have wondered what could be learned by looking into the past. I am sure there is much useful information to be gleaned from old reports as long as they are not too old to be out of touch with present reality.

I have in my possession a copy of what, in Bolton, we call " The Ballard Report." This is a report written by a Dr. Edward Ballard upon his examination of " The Sanitary Conditions of the Registration District of Bolton, Lancashire, and particularly upon its high infant mortality " in the year 1871. Dr. Ballard was asked to make this report specifically on behalf of the Local Government Board who were obviously disturbed by the situation in Bolton. We can accept his findings as those of a very experienced observer who, in the course of a busy life between 1818 and 1897, made many reports on outbreaks of infectious diseases and adverse sanitary circumstances in various parts of the country. He was particularly interested in typhoid fever and summer diarrhoea and in the still topical subject of the value of vaccination against smallpox. His report in 1882 on epidemic pleuro-pneumonia in Middlesbrough has a very modern ring in the light of our present-day interest in virus infections. The appalling conditions in Bolton described by Ballard are important to us to-day because such conditions existed only 83 years ago within the memory of a few people still alive, and the immense strides made in this relatively short period of time are greatly to the credit of those workers in all fields of social activity who have done so much. Their difficulty, however, was that they had such a bad start and had to strive throughout with such poor conditions compared with more fortunate workers elsewhere. The Industrial Revolution had left its mark in no uncertain manner and I believe we all feel that we may still have to rectify much which was created as a result of a truly fantastic revolution in conditions of life in South-East Lancashire.

Infant Welfare

I should like, first of all, to study the question of infant mortality which is generally regarded as a reliable index of social conditions, and of infant welfare in general. The Ballard Report has this question as its central theme and describes at great length the detrimental conditions prevailing against healthy living, and particularly against infant survival. The first striking fact is the enormously high infant mortality rate of approximately 250 per 1,000 live births in 1871. The following passages taken from the report will give some idea of the problems involved.

First, the general background of life at that time amongst factory workers :—

* Address to the North-Western Branch, Society of M.O.H., January 14th, 1955.

"The women mostly do piece-work. The standard of sexual morality is not very high among the operatives. Bastardy prevails largely. There is much intemperance among the men ; and the women, when their youth is past, often follow the example set them. Mr. Ferguson, one of the oldest medical practitioners in the town, and a certifying surgeon under the Factory Acts, informs me that he has observed a steady physical degeneration proceeding, which he attributes, in part, to the intemperate habits of the parents, and in part to the bad feeding of the children up to the time that they are old enough to work in the factories."

On the question of intestinal diseases we find the following :—

"It may be noted that the mean annual death rate from diarrhoeal affections at all ages, is more than twice as large as that in England and Wales during the previous decennium, and if we confine our attention to the death-rate as it occurred in children under four years of age, we find that it was nearer three times as large. Of the two most ordinary causes of this kind of mortality, namely, improper feeding of infants and exposure to the influence of a foul atmosphere, both are freely operative in Bolton."

And again :—

"The death rate from scarlatina under five years of age, was more than twice as large as that of England and Wales in 1866–70 ; that from measles nearly three times as large ; and that from whooping cough more than half as large again."

He goes on to comment further on infant feeding :—

"The children are often imperfectly nourished, improperly fed when they should only be suckled, and subsequently brought up very much upon bread and butter and tea ; as a result of which they become stunted, pallid, and rickety."

The attitude of mothers to their maternal duties gave Ballard much anxiety :—

"The ignorance of the mothers and of those about them must be regarded as another cause of the high mortality of the infants. Many of them cannot write their own names, their education having been neglected in their early life, in order that they might be useful at home in taking care of the younger children, or in order that they might add to the earnings of the family by working in the factories. Nor can their education for maternal duties be regarded more favourably. They were themselves probably brought up in the manner traditional in their station of life, and they naturally bring up, or attempt to bring up, their own offspring as they were brought up themselves, and generally to manage them as they in their youth saw other infants managed. Their experience has been that of a vicious and fatal system, and they have had no opportunity, nor have the means been afforded them, of learning a better."

Naturally, this state of affairs led to what amounted to almost a complete neglect of infants and to most improper feeding :—

"The third cause to which the high death rate of infants must be referred is the practice, among female operatives who become mothers, of returning to their work at the factory as soon as possible after their confinement. On enquiry among the women themselves, and of the surgeons practising in Bolton, I learn that in some cases the women have been known to return as early as a fortnight after their infant has been born, and very commonly they return to their labour within the month. If the woman should chance to have a relative or female friend at home, or a girl sufficiently old to carry the baby, with whom she can leave it, this is the plan usually adopted ; but if not, when she leaves for the mill at half-past five o'clock in the morning, she takes the baby out of a warm bed and carries it to some person, generally an elderly female, with whom she leaves it for the day. In preference she will carry it to someone residing near the factory at which she works, and this may be half a mile or a mile from her house. The season of the year makes no difference. If the distance be not too great, the mother will return at breakfast or dinner time, or both, to suckle her infant, otherwise she will not see it again until she leaves work in the evening. In the meantime the infant must be fed. Very young babies are fed usually with milk (such as it is) out of a bottle. Some of these bottles which I saw in use were uncleansed, sour, and encrusted with curdled milk ; and the medical men inform me that this quite coincides with their own repeated observations. In other cases the youngest infants are fed, as those a few months old are, with bread sopped in warm water in a cup, which is left for hours upon the hob to keep warm and become sour. When about to be used, the bread is broken down with the spoon, and a little milk is added. I saw one cup of sopped bread thus prepared for use. It was said to have been boiled, but it contained tough pieces which boiling had not even softened."

This inhuman attitude towards the young is illustrated very graphically by the reference in the report to the widespread practice of drugging of infants with narcotics :—

"The administration of narcotic nostrums by mothers and persons having charge of infants is exceedingly common. With one voice the medical men in the town, and also those in the outlying districts, testify to the prevalence of this fatal practice . . . patent medicines . . . are too expensive for the lower classes to indulge in ; they purchase a compound known here under the name of "Infants' Preservative," or they purchase poppy-heads and make for themselves a narcotic dose . . . Dr. Settle, practising in Bolton, had a child three months old die in his surgery last year with unmistakable signs of narcotic poisoning, and says that he has seen scores of infants die from the same cause, being called in at the last in the hope that he would give a medical certificate of the cause of death. . . . The custom of drugging infants is indeed all but universal among the operative classes."

Dr. Ballard sums up this sordid picture in the following words :—

"In the course of my experience as a Medical Officer of Health, I have seen a great deal of the families of the poor in London, but I can safely say that during the few days I was engaged in visiting the habitations of the operatives in Bolton, I saw a larger number of miserably emaciated infants undergoing the process of gradual starvation upon the system there in vogue, than I had ever seen before in as many months."

He then goes on to give a number of examples of the conditions described which are very grim in the extreme.

In view of the relatively short space of time separating us from such profoundly bad circumstances, I think we are entitled to ask ourselves whether the mode of life and practices of mothers in those days have left their mark on the present generation. The population of this area had undergone experiences which had little or no precedent and had, of necessity, to adopt a standard of life far below that current elsewhere. Such practices and traditions tend to remain, probably in modified form, but may have their effect on the general attitude to life of immediately succeeding generations. Dr. Brown's report dealt mainly with environmental factors but it did, in fact, touch on this rather difficult problem of personal and family standards in his general conclusion. I shall try to examine this further.

In quoting from Dr. Ballard's report I have selected certain sections dealing with matters on which I thought it might be possible to trace a connecting link between the past and the present and thus throw some light on the possible effects of past practices on our current problems and therefore to decide whether or not we are in a position to say that all has been done that could be done to wipe out the effect of the stifling conditions of 80 years ago.

One obvious common factor is the traditional use of a high proportion of female labour in the mills—as high as 25% of the total female population in 1871. The figures given to me by the Bolton Master Cotton Spinners' Association show quite clearly that of the total force of 24,450 persons now working in the mills, 15,420 of them are women, that is to say, nearly twice as many women as men and still about 19% of the total female population. If we take all industries into consideration we find that there are only three-quarters as many women as men employed. Of the female labour force in the mills, nearly 43% are between the ages of 18 and 40 which we may consider for this purpose, the range of child-bearing age, and of these, 60% are married women. The importance of these figures is the implied risk of premature births amongst this group of women employed in arduous factory work.

An opinion has been expressed that the incidence of premature births, although explained in many cases on clinical grounds, still leaves a large number of cases where there is no obvious explanation and that in at least some of these there may be a social or environmental cause. This opinion was given in the Joint Survey of the Royal College of

Obstetricians and Gynaecologists and the Population Investigation Committee on "Maternity in Great Britain" published in 1946, when it was stated that the duration of a mother's employment during pregnancy was significantly associated with a risk of premature birth. This matter has been recently followed up in an enquiry carried out by the National Birthday Trust Fund by F. M. Martin.* Medical Officers of Health in this area will have received a copy of this report with some comments from Dr. Martin and will remember that this new approach was unable to find any association between employment during pregnancy and the risk of premature delivery. Personally, I am inclined at present to accept the views of the 1946 Survey, because Martin has not yet published a separate analysis for the Lancashire area. His sample is a combined one which includes the London district and the Lancashire area and although it would appear from his paper that factory operatives on an average of the two areas cease employment at about the 26th week, I find, on enquiry from the mill welfare departments, that in Bolton a pregnant woman working in the mills ceases on the average at the 32nd week. This is a common practice and although it is customary for the doctor attending the mill to see these women at the latter stages of pregnancy and arrange for them to be put on lighter work, it seems to me that they fare worse than their sisters in the South of the country. Mill work is arduous and it will be very interesting to see, in due course, the separate analysis of the National Birthday Trust Fund figures for the North-Western area. It is true that the infant mortality rate is falling all over the country but it is still higher in Lancashire than the national average and in my experience fully one-third of infant deaths are associated with prematurity.

There are certain factors which have become operative since the 1946 Report was prepared and which may mask any apparent effect on prematurity of the occupation of the mother. I am particularly thinking of the rapid increase—about 50%—in the proportion of primigravidae coming under medical supervision at ante-natal clinics in early pregnancy. It is still possible, therefore, that the infant mortality rate, particularly that from prematurity, would have decreased at a much more rapid rate than it has in fact done, had mothers not worked until such a late stage of pregnancy. More work needs to be done on this problem and if an association is proved, the remedy will be extremely difficult because we shall come up against the problem of economics not only as it affects the family but also as it affects industry in this area.

The figures issued by the Central Statistical Office in its Annual Abstract of Statistics, 1954, give added weight to the problem which we are facing in Lancashire. Textiles and Clothing, the staple industry of the county, employ a higher proportion of female labour (54·25 and 66·92% respectively) than any other industry in the country if we exclude professional services, private domestic service and miscellaneous services which are not classified. In any case, these latter can scarcely be compared with factory work in our local industries, with regard to the physical effort required by the employees. I realise I am open to criticism from the housewife on this particular point but I still feel that the continuous nature of the physical effort in factories is important. Taking all occupations into consideration, the percentage of women in employment throughout the country is only 30·74.

Ballard showed quite clearly the disrupting effect of factory work by the mother on healthy family life and it would appear that this factor is still operative to some extent, as seen by the demand for day nursery places and the willingness of authorities to provide them, which varies considerably in different parts of the country. Some authorities are busily closing down day nurseries whilst others are just as anxious to keep going what provision they have. The controversy on this point is not within the scope of this paper but it is quite obvious that the policy of my own authority at least is to keep open its day nurseries specifically for the convenience of women working in the mills and not as a primary object to cater for cases of social necessity although these, of course, are accepted. We have six day-nurseries with 301 places, but in addition to that, the mills themselves provide six more nurseries with 240 places ; a total of 541 for a population of 165,600 which is quite an extravagant provision looked at solely from the point of view of social need.

Whether this high proportion of day nursery places is a good thing or not is a matter of opinion and there is much to be said on either side, but one thing, however, is important, in that at least these children get regular medical and nursing supervision which may not be given to those children who do not find a place in a nursery. It is true that health visitors should be in a position to give supervision in the home but difficulties do arise in that the health visitor, when the mother is working regularly, finds it extremely difficult to gain access to the home. This is a constant difficulty in my area and I am sure has been the reason for at least two cases of active rickets coming to my notice within the past 12 months. This is a serious situation since one usually considers this defect to have been eradicated throughout the country. I investigated both these cases and found that every effort had been made by the health visitor to get in touch regularly with the mother and child, without much success. When contact was made the advice given was not readily accepted. I must say that both children were the offspring of parents of foreign extraction fairly recently arrived in this country and they may have had some difficulty in understanding our system. However, it does illustrate that the danger of non-supervision still exists. It would appear that the practice of daily care of infants by people outside the family group is something which has been accepted on a large scale as quite normal in this county. On the other hand, we have only one registered child minder in the town in spite of a diligent search. Most children are farmed out during the day to relatives or friends or in ones and twos and do not come within the provisions of the Act.

The obvious lack of health education of any sort is quite evident from Dr. Ballard's remarks. Here at least we can show really considerable progress through the medium of the health visitors and the infant welfare centres. For some reason not clearly understood, the infant mortality rate in Bolton fell to 28·4 in 1952 from 40·8 in the previous year. Previously there had been only a steady decline and the rate had been maintained at a level usually considerably above that for the country as a whole. This sudden change was maintained and improved upon in 1953 and 1954. I found it difficult to understand this very rapid change and I consulted my colleagues in other towns in Lancashire to find if their experience had been similar. I would like to thank all those who took the trouble to send me the necessary information. I found that eight other Lancashire towns had experienced a similar sharp fall either in 1951, 1952 or 1953, namely, Barrow, Blackpool, Bootle, Burnley, Oldham, Rochdale, Southport and Warrington. I exclude Bury which has a very low rate at present because there have been considerable fluctuations over the past few years. Other towns showed a more steady decrease.

One interesting fact which I personally think has some bearing on the subject in Bolton is the rapidly rising number of home visits paid by health visitors to children under the age of one year and which is in almost an exact inverse proportion to the infant mortality. The home visits increased from 6,879 in 1950 to 15,653 in 1954 and at the same time, the infant mortality fell from 35·5 after a sharp rise to slightly over 40 in 1951 to slightly less than 29 in 1954. The number of clinic attendances has not varied widely over this period but the type of person who visits an infant welfare centre is not one who is often desperately in need of advice. On the other hand, those who do not attend have amongst them the hard core of people who really need

* Primiparae and Prematurity. *Med. Offr.* (1955). **92**, 263.

help. It is in this field of health education that the health visitor is supreme and although there are, no doubt, many factors contributing to the fall in infant mortality, I cannot ignore this rapid fall recently and its seemingly close association with the number of home visits. I should be interested to hear from any of my colleagues whether they have any other explanation to offer for the rapid change. There was a similar sudden fall in the infant mortality rate for the country as a whole between 1947 and 1948 when the rate fell from 41 to 34 although there had been only a steady decline previously and has been a steady decline since. The sudden fall, where it has occurred, in Lancashire, has taken place at a later date than the sudden national fall but here again I can see no common factor between the two occurrences. The decline in my own town has not taken place in any particular group of causes of death but generally throughout the whole field over the four years from 1951 to 1954 inclusive, neither has there been a marked change in the neo-natal death rate which could be attributed to improved hospital techniques (about 80% of births in Bolton take place either in maternity hospital or maternity home). In the same period of time, *i.e.* 1951 to 1954 inclusive, there was little change in the neo-natal death rate. This would seem to strengthen the argument that better health visitor supervision was at least one of the operative factors.

One of the most appalling revelations of Dr. Ballard's report was the universal use of narcotics on the children of the mill operatives. In an attempt to evaluate the present situation on the use of medicaments, I arranged for the health visitors to enquire specifically about this practice in respect of children born in August, September and October of 1953. This enquiry has been carried out within the last few weeks in order that a full year's experience could be obtained. The health visitor asked her questions in accordance with a set formula and completed a schedule in order to ascertain the frequency and use of medical advice on behalf of children from the age of one to 13 months, together with an indication of the frequency of minor and major illnesses, and to find out to what extent medicaments were used by the mother excluding those prescribed on medical advice. Certain information was also asked for with regard to the frequency in the administration of vitamins and in what form. The analysis of this material will take some considerable time but one or two points seem worthy of comment in this context. There were over 600 births in the period in question and the latest number of returns from the health visitor amount to 520. Of these, only eight infants did not have any medicaments at all during the first 12 months of life and only 10 received medicaments on one or two occasions ; the rest received medication either regularly or more frequently than once or twice during the period of a year. These figures do not include vitamins and refer solely to medication given by the mother without medical advice. As might be expected, external applications accounted for a good number of the instances. Indeed, these were used on 260 occasions regularly. With regard to internal medication, these were given in 153 instances regularly. Fifty-five children received teething powders or mixtures regularly, say once or twice a week. This is of interest in view of the potential danger of some of these preparations. Twelve children were found to be having glycerine and borax treatment of the mouth regularly. It may be that similar things are happening elsewhere in the country but I have not been able to obtain any relevant information. What is clear, however, is that there is a considerable amount of medication without medical advice of children under the age of one year. I hope, after more careful examination of the material I have obtained, that a more detailed assessment will be available.

Environment

To go back to 1871 once again, the environmental circumstances can be described in Dr. Ballard's own words by a few brief extracts from his report :—

" The portion of the town included between the river on the North, Moor Street on the South, Bradshaw Gate on the East, Moor Lane on the West, is as crowded with houses as it is possible almost that such an area can be."

With regard to sewerage :—

" No special provision is made for the ventilation of the sewers. What, then, becomes of the sewers' gases ? In some parts they may find an outlet in the rainwater pipes of the houses, where they are carried untrapped into the drains. . . . It is more than probable that the gases escape largely into dwellings, and especially into the dwellings of the poor, by means of the sink pipes."

The disposal of waste matter was in a chaotic state :—

" Bolton is not a water-closeted town . . . there are under 500 closets. The midden privy is all but universal : it meets the eye and the nose unpleasantly everywhere. . . . The construction of these conveniences is for the most part such as to represent nearly every fault that can attach to them . . . they being . . . unpaved, undrained, wet, and swampy ; the contents oozing through the walls of dwelling-houses, and everywhere offensive."

With regard to housing construction we find :—

" . . . the town has for some years past been spreading in the northerly direction. The greater part of these new houses are of the cottage class, adapted to the use of the operatives that have been flocking into the town with the increase of its mills and trade. They have chiefly been erected by speculating builders, without regard to anything but their adaptation for sale, and without much regard being paid to the building bye-laws of the Corporation, who have exercised little control over the proceedings of these people. I have been informed, upon good authority, that many of the houses have been erected upon the sod with no more excavation than was necessary for the footings, and without previous drainage of the land, and that they were occupied long before they were dry or properly habitable."

On the topical subject of smoke, Dr. Ballard is brief but to the point :—

" Tall chimney-shafts are seen in all directions, and the atmosphere is smoky and grimy."

In general on housing :—

" . . . the residences of the working classes in the older parts of the town, I may say that beside their close packing, the houses are dark, and ill-ventilated ; and that there are very many which are not sufficiently commodious for the decent lodging of the occupants."

Great improvements have, of course, been made, but a mere superficial examination of the town shows how much still remains of the inheritance of insanitary conditions. The rapid growth of the town which, for 50 years, was completely unregulated, resulted in a hotch potch development of houses and factories side by side throughout the whole area. Speculative building was rife, and we are now experiencing the aftermath of such development. A few of the old narrow, crowded streets remain, ironically enough housing largely the legal profession and the Executive Council. Dampness and unfitness in other respects abound in the houses thrown up by speculating builders. Although the survey required by the Housing Rents and Repairs Acts, 1954, will take some time yet to complete, it is possible that of the 55,784 houses in the borough, at least 6,000 will need to be demolished and more than 12,000 scheduled for repair—a formidable percentage of the total. It is not surprising that under these circumstances, the Corporation itself provided before 1948, sufficient maternity home accommodation which, in addition to hospital accommodation, can now cater for almost 80% of the confinements, as against a national average of somewhere around 64%.

The history of the methods used in the disposal of excreta since the time of Ballard's report has helped me to understand the great difficulties under which the Corporation have worked as a result of the unregulated expansion of the town and the apparent indifference of both the population and the Council to tackle the problem wholeheartedly. Even in 1896, Dr. Gould, one of my predecessors, produced some very striking statistics to show the effect of various methods of disposal on the incidence of typhoid fever. He showed that where there were privy ashpits, one case occurred for

every 77 privy ashpits in use ; one case for every 100 pail closets in use ; one case for every 150 waste water closets in use ; and one case for every 582 fresh water closets. These figures are significant, but in spite of this evidence being brought to their notice, the Council went ahead with sanctioning the building of modified ash closets, and at a later date to waste water closets, the reason quite frankly being given with regard to the waste water closets scheme, that they were less costly than fresh water closets. In 1891, a scheme to borrow the sum of £12,000 for the conversion of the worst of the middens was at first rejected by the Corporation, and only a year later approved when it became obvious that as the result of a Local Government Board enquiry the proposal was a necessary one, and that powers to borrow the money would be readily granted.

The present-day importance of all this is that ashpit conversion in the town has only just been completed. Seventy-seven privy middens still remain, although almost all are in the rural part of the borough, and there are still 247 pail closets. The waste water closets still abound in their thousands ; it is estimated that some 11,000 still remain. These were considered originally to be efficient structures, and to a large extent this may have been true, but many are now showing signs of inefficiency. They are difficult to repair owing to their structure and the fact that the flushing mechanism is placed underground. Many are extremely insanitary and it is likely to take some years before the present scheme of conversion is completed.

The sewers are still insufficiently ventilated in some parts of the town. There are few intercepting traps. Ventilation is mainly achieved by air-holes formed in manhole covers to the sewers. The foul air is released at the level of the street surface. Although these manholes may give enough ventilation for normal purposes, exceptional circumstances such as have been seen recently with the discharging of foul liquor from a gas holder into a sewer, have led to very bitter complaints. Many buildings in the older part of the town, owing to bad construction and possibly the high level of the subsoil water, are in a state that a little further deterioration renders them potentially dangerous.

The haphazard development of the town, with its intimate intermingling of houses and factories, makes the problem of smoke abatement by means of smokeless zones under private Act powers a difficult one. The smoke problem in Lancashire is large and it is not without interest to note that three of the first four statutory smokeless zones to be established were in this county. The zone in Bolton was established before the Beaver Committee reported their findings and recommendations, so that we have a certain amount of practical experience already, and you may be interested to know what our first experiences have been. Some of these views may be provocative, but it is well to know the difficulties before further widespread action is taken, if and when the Beaver recommendations are implemented.

First of all, it is difficult to see how complete smoke abolition can be enforced from factories where certain types of mechanical stoker are installed, even should prior approval powers be granted generally. Even when such stokers have been approved by a technical panel of fuel efficiency experts, and although these plants appear perfect on paper, and though the manufacturers of the equipment are firms of national repute, in practice, smoke of variable density may still be emitted, and we feel certain in Bolton that sprinkler stokers cannot, at all times, comply with smoke emission Ringlemann Shade Card No. 2, as referred to in the Beaver Committee Report. There are difficulties, too, with regard to domestic fires, and here the question of fumes, particularly where old-fashioned grates and chimneys are installed, has to be considered, especially from the point of view of down-draught.

It may also be necessary to take formal action on the question of the quality of smokeless fuel made available to dwelling houses in the zone, and stocks of the right type of coke must be made available for domestic use. This point can give rise to needless complaints in the initial stages of the administration of the zone. Ordinary domestic gas coke of not less than 1½- to 2-in. size is desirable, and protection of this coke from weathering is essential in order to obtain the best results if the coke is to be used on open fires. The Beaver Committee recommend financial assistance in the conversion of heating appliances to the burning of smokeless fuels, and I agree from experience that this is a necessary step to take, and one which has had to be agreed to in Bolton.

The extension of efforts to prevent atmospheric pollution is essential but it may well be that, as a first step at any rate, the extension should be by way of smoke control areas rather than smokeless zones in the way suggested by the Beaver Committee, and this indeed has more than a little support from our experience already in Bolton.

Neglect by the Authority

Dr. Ballard was bitter in his criticisms of the administration of the sanitary services. He says :—

" The thoroughfares and footways are fairly paved, but the cleansing of the surface might be better than it is. The courts and yards, even where inhabited dwelling-houses stand, are in many instances not paved in any way, or the paving is in a neglected condition, water and sewage matters sometimes lying in pools upon the surface. These places appear to be systematically neglected, both as respects paving and scavenging. If it should be considered no part of the duty of the Local Board itself to provide for these matters, it certainly is its duty to require the owners of the property to keep such premises in proper order and wholesome."

And :—

" There can be no question that a great deal has been done in past years, and even recently by the Corporation to improve the town of Bolton. Large and important public works have been undertaken, and upon these large sums of money have been beneficially expended. At the present time the Corporation is engaged in erecting a fine Town Hall, in intercepting and dealing with the sewage, and in increasing and improving the water-supply. And for all this, and the public spirit thus exhibited, much credit is due. But here praise must terminate. The Corporation appears to have been so absorbed with these great undertakings as to have almost forgotten the equally important duty which develops upon it, as a Local Board of Health, of keeping the town free from nuisance, and of carrying out the provisions of the statute law for arresting the spread of epidemic maladies."

And finally :—

" The Corporation has provided a staff of its own to empty privy middens, and inspectors to see that they are cleansed and do not become nuisances and a danger of the public health (this was obviously not being done). There is something very wrong here in the administration."

There are scathing remarks about the fact that there is only one inspector of nuisances who, judging from the condition of the town, can scarcely be regarded as having performed his duties with too great zeal unless, of course, his usefulness was being obstructed by defective arrangements in his department or by an overwhelming amount of work having been laid upon him.

There was no Medical Officer of Health, except in name, a doctor of the town occasionally giving advice when asked for. He was paid no salary. The first full-time Medical Officer of Health was not appointed until 1874. I make no comment on the implications to be drawn from Dr. Ballard's words, which are undoubtedly a true record of the facts. The important conclusion to be drawn from them, however, is that the appalling conditions which prevailed were largely due to the unfortunate circumstances of the growth of the town, springing up quickly in accordance with no set plan, followed by 50 years of unregulated development, undoubtedly caused considerable confusion not only in the pattern of the structures erected, but also in the minds of the inhabitants. Indeed, when the borough was incorporated in 1838 it had an extremely uneasy beginning, the very legality of its existence being challenged in its early years by a large section of the population. This situation had to be met by the Corporation of the time, and by successive Councils since, and although a tremendous amount of improvement was achieved, it was only after strenuous efforts

of succeeding generations, and this in itself may have had a retarding effect throughout.

I think it is necessary for me to offer a word of explanation about the title of the paper. I have, of course, been talking essentially from facts collected in Bolton, and although I have widened the title to include Lancashire, I feel that I am largely justified in so doing because of the similarity in development of so many of our industrial towns. As a newcomer amongst you, you may think it strange that I should choose this subject rather than wait until I had more experience of the area. I can only reply that the problem is one which has fascinated me since I arrived amongst you, and the matters which I have discussed are those which cannot escape notice in the course of any day.

One final note on the question of staff. We have a considerable amount of work yet to be done in all branches of the public health field. Our mortality and morbidity figures alone show our greater need than elsewhere, and yet many of us are constantly suffering staff shortages. I refer particularly to health visitors and sanitary inspectors. A recent report to the North-Western Federation of Members of the Queen's Institute of District Nursing shows quite clearly the tendency of the drift of nursing staff from north to south, that is to say, away from much of the work which still remains to be done in public health. It would seem logical that posts in certain areas should be made more attractive. I am aware that there are national shortages, but somehow a more even distribution should be assured. I am also aware that certain authorities have recently taken independent action to raise salaries above usually accepted national scales. Desperate circumstances certainly need drastic measures to deal with them, but I am not sure any of the methods so far tried are the right ones. Nevertheless, somehow the staff must be made available if the back log of work is to be overcome.

PHYSICAL AND PSYCHOLOGICAL ASPECTS OF BORSTAL TRAINING*

By D. A. OGDEN, L.M.S.S.A.,

Medical Officer, H.M. Borstal Institution, Portland

While Medical Officers of Health are not so much involved in matters which touch on Borstal Training as colleagues in the Hospital Service, nevertheless occasions do arise when the Institution Medical Officers need your advice and assistance, and I am glad of the opportunity of thanking your honorary secretary, Dr. Gordon Wallace, for his help on various occasions when I have needed to approach him.

Before I refer to the specific problems of Borstal Training it might be helpful to give a brief résumé of the development of the Service.

In 1894 the Prison Committee recommended the experiment of setting up a Penal Reformatory and that the Courts should have power to commit to these establishments offenders under the age of 23 for periods of not less than one year and not more than three with liberal exercise of a system of licence. As a result a pilot experiment was started at Bedford Prison, and, following encouraging reports, in 1900 part of Borstal Convict Prison was set aside for this experiment to be extended.

In 1907 the Courts were informed that the system in Borstal was ready, and in the following year the new Borstal Training received statutory recognition in the Prevention of Crime Act. In 1914 the conditions were modified by further Act of Parliament to remove the previous restriction that a sentence of Borstal Training could only follow conviction for an indictable offence, and to raise the minimum to two years. Since then constant development has taken place until the present stage has been reached, although the last war caused very serious disintegration and loss of ground which had to be made up by gradual stages.

* Address to the Southern Branch, Society of M.O.H.

Simultaneously the number of other units in the system increased, taking the name Borstal from the original. By 1934 seven Borstals were in use, and by 1951 the number had risen to 18 for boys and two for girls.

These institutions make up a system in which each unit plays a part—often widely different. Thus, two are Allocation Centres, two are of full security, three are of closed type and the remainder open. Briefly a closed Borstal is one in which an outer boundary can be sealed off, but is normally only done so at night, whereas an open Borstal is situated in an estate with no outer wall.

The Borstal System To-day

This, then, is the size to which Borstal has grown, and I turn now to a description of the training, giving as I go the various levels at which the Medical Officer is concerned.

Before sentence, reports are prepared for the guidance of the Courts concerning fitness for a youth to undergo Borstal Training. It is the responsibility of the Medical Officer to determine whether there are any physical or mental reasons why such training should be unlikely to be effective.

After sentence a youth is sent to an Allocation Centre and it is here that the system really begins. The function of the Allocation Centre is to decide which of the various Borstal Institutions is the most suitable for an individual youth. One Institution provides work reclaiming land from the sea, another is predominantly agricultural in training, another has a routine adapted to youths of lower than average intelligence rating, and several institutions have industrial training shops. The Allocation Centre has to balance these possible lines of training against the likelihood of a particular youth staying at an open Borstal or absconding, his degree of maturity and the extent to which his criminal activities have progressed.

A very full investigation is carried out at the Centres, and much material is gathered concerning past history—family history and home conditions. The function of the Medical Officer is to report firstly any physical defects which will need to be considered when allocation is decided, and any mental or psychological features which will need to be investigated or treated. A resident psychologist puts the youths through a battery of tests designed to give an assessment of intelligence level and mechanical aptitude, and any youth showing mental abnormality is referred for psychiatric opinion. A small proportion are withdrawn for psychotherapy before allocation.

The great majority, however, are sent on to the Training Borstal chosen for them with full reports on personality, education level, intelligence level and expected ability.

At the actual training establishments the problems from the medical point of view vary greatly from institution to institution. Thus at the open Borstals, to which are allocated the youths who seem the best prospects, the work involves mainly the day-to-day medical care of the population, and this is usually taken on by a local general practitioner. At a large closed Institution such as the one at which I am in post the position is very different. Youths are allocated to such an establishment because either physical or psychiatric attention may be required. They may also be transferred from open Borstals where their behaviour has been abnormal. I do not wish to give the impression that all allocations to closed Borstals are on medical grounds—but a fair percentage are—and as a result a full Medical Officer is in post to deal with the many problems which arise.

There is not time to describe in detail the process of training—but briefly the objects are to instil the habit of work, develop the ability to accept responsibility and obey a community's rules, while at the same time tackling individual moral weaknesses.

The Work of the Medical Officer

The work of the Medical Officer comes under three headings, and I will discuss them in turn.

(1) *The Care of the Sick*

This follows very much the lines of practice in the Armed Services. It might be thought that malingerers abound—but such is not my experience. There is the inevitable minority of such—but minor neurotic and hysterical manifestations are more evident—and are indeed a common feature of the delinquent personality.

(2) *Physical Rehabilitation*

Many youths coming to Borstal have been the subject of parental neglect—and this certainly applies to medical matters. Only occasionally is serious malnutrition met with, but many physical defects are found which can be corrected. It is highly important that this should be done, firstly because it is essential that physical limitations of ability to work on release should be removed to improve a youth's prospects in the difficult world he re-enters, and secondly because the psychological effect on the youth that society has bothered to do something for him is most useful in modifying anti-social feelings. It is therefore my practice to draw the Specialist's attention to my hope that surgical attention may well produce this two-fold result in suitable cases and I would like to pay tribute to the most valuable assistance given by the Hospitals Staffs in this way.

For the Medical Officer to complete physical rehabilitation it is necessary to call on the specialist services a great deal—and indeed the whole resources of the medical services of the area are called upon at various times—and freely given.

The most common disabilities met with are ear, nose and orthopaedic faults. Chronic nasal obstruction or sinus infections are sufficiently lowering to aggravate moral failings and many S.M.R. operations are carried out. Many orthopaedic conditions are corrected or improved by operation or physiotherapy. As an example I quote a very severe case of genu varum awaiting correction by ostectomy and post-poliomyelitis cases fitted with correct supports or special boots.

In particular I find that squints are very well worth attention. Operative correction almost invariably has a marked effect on personality as the sense of inferiority engendered by the squint lifts.

On the medical side glandular dysfunction cases occur and even in this age-group peptic ulceration is found.

Looking at more unusual cases, plastic surgery is called into action from time to time and last year a youth from my Institution was submitted for cardiac surgery, closure of a serious fault in the aorta being successfully carried out. The results in this latter case have been most encouraging. The youth is earning a living and behaving well.

(3) *Psychiatric Rehabilitation*

I have mentioned that youths noted at Allocation to be psychiatrically unsound are sent where a full-time Medical Officer is in post but in addition others may begin to show abnormalities during training. Consequently a great deal of psychiatric investigation becomes necessary, and is of a type for which little precedence in other fields of psychiatry can be found.

This work in delinquency is constantly under the handicap that the therapist can never really be certain whether the patient is genuinely seeking help, and indeed it is my experience that in most cases it is first necessary to develop the insight that such help is needed, before any therapy can be started.

This would seem to be a serious barrier, but there are compensatory features. Most important is the fact that the Medical Officer who proposes to analyse emotional difficulties is also the one a youth will see for treatment of a corn, constipation or other trivial complaint. As a result he is not subjected to ridicule by the other inmates and tends to accept psychiatric exploration as just another bit of doctoring. This is of great value, as in contrast a visiting therapist immediately meets a barrier of suspicion.

Psychotherapy can be divided into minor and major forms. In my experience about 25% of the intake to a Borstal with a full-time Medical Officer need minor psychotherapy involving analysis of emotional difficulties, and follow-up interviews. The treatment of such cases involves close consultation with the administrative staff. One of the greatest problems is the arranging of leniency at certain times, without upsetting the discipline of the Institution. An emotionally unstable youth who offends occasionally may be putting forth a greater effort than a youth with no problems who quietly cruises along—yet undue leniency can menace the whole discipline of an institution. The correct balance between therapy and administration is very delicate.

Major psychotherapy involving such matters as deep analysis, narcotherapy, residential group therapy and psychodrama are not carried out at training institutions. For the fewer cases considered suitable facilities are available in the Service when required.

Such is the work of the Medical Officer at the training unit—but Borstal training does not end with release of the inmate.

He then passes on to licence to behave well under supervision of a local officer, and much trouble and time are taken by the Borstal After-care Association to guide him in resettlement. Should his conduct be unsatisfactory he can be recalled to a special centre set aside for the purpose—where the whole circumstances of the failure are considered. Once again a psychological assessment is made and any case thought to show unusual features is referred to the visiting Medical Officer, which at present happens to be myself.

A Board then considers all aspects and decides how soon the youth may once more be tried on licence.

That briefly is the pattern of Borstal Training, but before closing I should refer briefly to some of what may be termed the thorny points.

The Psychopathic Personality.—This is no time to discuss exactly what the term means. I would only say that conduct which seems to indicate clearly psychopathic tendencies is common in Borstal but for every one who goes on to become a true psychopath there are others showing just as typical behaviour who learn control and stabilise. I am therefore of the opinion that the diagnosis psychopathic personality should not be used in the Borstal age group—and that apparently psychopathic conduct is not necessarily a sign of an untrainable youth.

The Homosexual.—As may be imagined, the presence of the homosexual in an all-male society provides many serious problems for the administration, but from the point of view of the Medical Officer this often provides the opportunity to make an approach *re* psychiatric treatment—and since personalities are not yet set, there is always the possibility of successful modification of the condition.

The Epileptic.—It will be appreciated that if attacks are severe and frequent the prospects of training are seriously affected—but fortunately most cases can be reasonably controlled. Simultaneously a minor psychotherapeutical approach can be made on the almost invariable emotional overlay and it is my experience that most epileptics can be stabilised by time of release on far less drugs than at the start.

Conclusion

To conclude this survey of Borstal Training, which has of necessity passed lightly over many important points, I should like to give my personal opinion that the medical profession must and should play an increasing part in dealing with delinquency, not by replacing tried methods of character training, but by concentrating on the removal of physical and psychological barriers which may prevent such training taking effect.

BOOK REVIEW

Education and Health of the Partially Seeing Child. By WINIFRED HATHAWAY. 3rd Edition. Pp. 227. New York: Columbia University Press for the National Society for the Prevention of Blindness.

Ever since Professor Alan Moncrieff in the Dawson Williams Lecture[1] advised school medical officers to study how the U.S.A. runs its school health service we have welcomed every opportunity of doing so. Sir Allen Daley[2] in his "Impressions of America" could devote only two paragraphs, but Dr. Peter Henderson[3] at the joint meeting of the School Health Service Group of the Society with the Medical Officers of Schools Association painted a lively picture of what he saw during his visit. Now we are given a whole book on the "partially seeing child", written by Winifred Hathaway, the third edition of a book first published in 1943. It is written with confidence and carries an air of authority suggesting that it may be officially recognised as a text book on the subject corresponding to the valuable information in our own "Health of the School Child" and other publications of the Ministry of Education. In the opening chapter a warm tribute is paid to the work of Dr. James Kerr of the L.C.C. (what a pity it is that his great book "The Fundamentals of School Health" cannot be brought up to date), of Bishop Harman and other pioneers. There is an interesting chapter on the school health service of America reminding us that it may be provided by a department of education, or by a department of health or even by a private agency, while in small communities or in rural areas there may or may not be provision for a medical service although in many schools a nursing service may be provided. Parents have to pay for their children's spectacles, getting help from voluntary organisations when necessary. It may be presumed, however, that American children have much the same sort of eyes as English children and need the same consideration if their vision is defective. The definition of the Partially Seeing includes those with visual acuity of 20/70 or less (the Snellen standards are recorded in feet, 20/200 corresponding presumably to our 6/60 and 20/20 to our 6/6, with intermediate steps of 20/100, 20/70, 20/50, 20/40 and 20/30) and those who, in the opinion of the eye specialist can benefit from the special educational facilities provided for the partially seeing.

It is interesting to compare these standards with those of the Advisory Council on Education in Scotland (H.M. Stationery Office, 1950) which attempted to find more or less definite standards but ended up by being in effect no more precise than the definition given in the S.H.S. and Handicapped Pupils Regulations, 1953, which stuck closely to the former definitions in the 1945 Regulations, viz, "those who cannot follow the normal regime of an ordinary school without detriment to their sight or educational development". For a number of years we, in this country, have felt that the no detriment phrase was out of date, holding that, as was made clear by Dr. Stenhouse Stewart[4], the use of the myopic eye even for near work was seldom dangerous and that detachment of the retina was a rare condition in children (although he did utter a warning about high diving and boxing for myopes). Miss Hathaway, however, in writing about children with progressive myopia lays emphasis on "careful attention to the general health and physical activities in order to prevent possible detachment of the retina". It is estimated than one in 500 pre-school and school children is partially sighted, a remarkably high figure compared with Scotland's 0.75 per 1,000 and the Ministry of Education's cautious statement[5] that "the rate of one per 1,000 on the school register as suggested by the Board of Education Committee in 1934 was an overstatement". In a chapter on ascertainment, it is interesting to learn that an intensive study in St. Louis showed that a combination of Snellen Test with careful observation by the teachers gave nearly as good results in finding children in need of eye care as the most complicated binocular instrument test and produced far fewer unnecessary referrals.

The separation of the partially seeing child from his parents and segregation in boarding schools is thought to be most undesirable (although Dr. Henderson said that he thought that there were hundreds of such children in residential schools for the blind). Instead of being registered in special classes or schools for the partially seeing they should be enrolled in regular grades joining in as many activities as may seem desirable; their special needs may be met in a room in the building provided with the necessary physical equipment and educational material for those activities which cannot be included in the schedule of the regular classroom. Even in the large cities the number of partially seeing children is not large enough to warrant equipping a special room in each school; hence, one central school-building may be selected to serve an area, the partially sighted children presumably sharing certain activities with normally sighted children. In Oaklands, California, teachers of the partially sighted go from one ordinary school to another working directly with the partially sighted and with the teachers of the classes in which the children are enrolled. For children in rural areas, boarding in towns where there may be facilities for the partially sighted has been abandoned because of the difficulty of finding desirable boarding homes. In such cases the needs of the partially sighted are met by supervisors who give advice to the ordinary class teachers. A considerable proportion of the book is devoted to detailed description of apparatus, furniture, class-rooms, etc. Lens magnifiers are not favoured but the use of projection devices is being developed.

[1] *Brit. Med. J.* (1950) ii, 795.
[2] *Public Health* (1948) **61**, 77.
[3] *Ibid.* (1954) 67.
[4] *Ibid.* (1947) **60**, 215.
[5] "The Health of the School Child," 1952-53.

SOCIETY OF MEDICAL OFFICERS OF HEALTH

PROVINCIAL MEETING OF COUNCIL

The Provincial Meeting of the Council of the Society was held in the Council Chamber, Council House, Victoria Square, Birmingham, at 10 a.m. on Friday, June 17th.

At the commencement of the meeting, the President, Dr. Jean M. Mackintosh, welcomed the members of the Council to Birmingham and expressed the hope that they would enjoy the meetings and hospitality which had been arranged for them.

There were 30 members present, the Chair being taken by Dr. C. Metcalfe Brown. The Minutes of the last meeting were confirmed and signed, and the meeting then went on to consider the following matters.

Centenary of the Society

It was reported that meetings in connection with the Centenary of the Society would take place on May 15th, 16th and 17th, 1956. There will be a Banquet at the Mansion House on the evening of May 15th, at the kind invitation of the Corporation of London, a Reception at County Hall, at the invitation of the London County Council, and a Reception in the Great Hall, B.M.A. House, at the invitation of the British Medical Association. Members of the Council expressed their great appreciation of the hospitality which was being extended to the Society by these three bodies and the Special Centenary Committee was given power to make arrangements for such other meetings as might be considered desirable.

Reference was made to the fact that Dr. W. S. Walton, of Newcastle, was preparing a history of the Society with particular reference to the second fifty-year period. Dr. Walton told the meeting that he was particularly anxious to obtain information or records concerning the period 1906 to 1926, and any members of the Society who can give any information to Dr. Walton are invited to do so, either direct or through the Central Office.

Meat Inspection

It was reported that a Joint Meeting of representatives of the British Medical Association, the British Veterinary Association and the Sanitary Inspectors Association, and the Society of Medical Officers of Health, had been held on May 24th. It had not been found possible at the meeting to agree to a future joint policy for meat inspection in view of the fact that the B.V.A. were of opinion that veterinary surgeons should be brought into the meat inspection service in a supervisory capacity. The other three associations had fully accepted that veterinary surgeons had a part to play in the meat inspection service and had agreed that all necessary facilities should be made available to them. They

could not agree however that they should be in a supervisory capacity and felt that the representatives of the B.V.A. should be satisfied with being appointed in an advisory capacity. The Council was informed that Dr. H. D. Chalke had taken the Chair at this difficult meeting, and the members present congratulated him on his Chairmanship. A general discussion on the question of meat inspection ensued and it was agreed that the matter be raised again at the September meeting of Council.

Food Hygiene

It was reported that in accordance with the instructions of Council, a letter had been addressed to the Ministry of Agriculture, Fisheries and Food, in support of the action taken by the B.M.A. to ask for the appointment of a medical representative on the Food Hygiene Advisory Council.

Annual Dinner

It was announced that arrangements had been made for the Annual Dinner of the Society to be held at the Connaught Rooms, on Thursday, November 10th, 1955.

Recruitment to the Dental Profession

The Council considered the draft memorandum prepared by the Dental Group, relating to an invitation from the Ministry of Health for the Society to submit evidence to the Interdepartmental Committee which had been set up to ascertain the reason for the lack of candidates for training as dentists. It was agreed that the Dental Officers, M. & C.W. and School Health Service Groups should consider the draft memorandum with a view to suggesting minor amendments or additions. Subject to any such amendments, the Council adopted the memorandum as its evidence to the Interdepartmental Committee, and agreed that if oral evidence was required the Dental Officers Group be invited to appoint three members, and the M. & C.W. and School Health Service Group one representative each.

Housing Improvement Association

The Council agreed to accept the invitation received from the Housing Improvement Association for the appointment of a representative to serve on the National House-Builders Registration Council. Dr. H. C. Maurice Williams kindly agreed to represent the Society on this body.

Local Authority Occupational Therapy Service

A letter, dated June 6th, was received from the Association of Occupational Therapists, asking the Society to support them in their effort to secure that their work should be subject to medical direction, through the Medical Officer of Health or the General Practitioner in charge of the patient. It appeared that in some areas occupational therapists were employed in welfare services where there was no medical control or advice available. It was agreed that a special committee be appointed to discuss this important matter with representatives of the Association of Occupational Therapists.

British Epilepsy Association

The attention of the Council was drawn to the fact that the Constitution of the British Epilepsy Association did not provide for representation from the B.M.A. or the Society, although many other Associations had the right to appoint representatives. It was agreed to ask the British Epilepsy Association to consider the possibility of arranging for representation on its governing body.

Representation

The following members were appointed to represent the Society on the bodies or on the occasions named :—

Public Health Engineering Advisory Committee—Dr. J. Greenwood Wilson.

National Smoke Abatement Society—Annual Conference, Bournemouth—Dr. Charles F. White.

Royal Sanitary Association of Scotland—Annual Conference, Troon—Dr. W. S. Walton.

Empire Medical Advisory Bureau—Sir Allen Daley.

MAY ORDINARY MEETING

An Ordinary Meeting of the Society was held on Friday, May 13th, at 12.45 p.m., when 37 members were present. The President, Dr. Jean M. Mackintosh, was in the Chair.

Minutes of Last Meeting.—The Minutes of the Ordinary Meeting held on March 4th were confirmed and authorised to be signed by the President.

Election of President for the Session 1955–56.—It was reported that under Article 17 of the Society's Articles of Association the name selected by the Council for submission to the Ordinary Meeting for formal election was that of Dr. Charles F. White, Medical Officer of Health for the City of London. The meeting unanimously elected Dr. Charles White, who briefly returned thanks for the honour given to him. He was congratulated by several members present on having been elected as President of the Society for the Centenary Year.

Elections.—The following candidates having been duly proposed and seconded were then elected to membership of the Society :—

Fellows : Drs. J. D. W. Barnett, M. S. Barnett, J. F. E. Bloss, M. Brayshaw, M. E. Buckley, R. J. O. Catlin, J. Clark, J. S. Coleman, D. J. Cusiter, C. M. Dorman, A. H. Fairlamb, H. T. Findlay, R. G. Gall, B. W. Hordern, W. Johnston, A. W. Kilpatrick, R. L. Lindon, M. G. McDonald, M. C. MacLeod, W. C. Maguire, J. C. Main, A. Mair, E. C. Murphy, P. X. O'Dwyer, M. Park, G. H. G. Poole, C. H. Prestoe, J. S. Robertson, R. E. W. Sillett, B. J. Sloan, E. G. Taylor, H. J. Webster, A. L. Winner, T. S. Wilson.

Associate : O. N. Bywaters.

Life Members.—The following were elected fully-paid Life Members of the Society on the nomination of the Council and of their Branches :—

Home Counties Branch : Dr. Malcolm Barker, Formerly M.O.H., East Ham C.B.

Southern Branch : Dr. G. W. Fleming, Formerly M.O.H. and Div. S.M.O., Borough of Gosport.

JUNE ORDINARY MEETING

An Ordinary Meeting of the Society was held in the Council Chamber, Council House, Victoria Square, Birmingham, on Friday, June 17th, at 3 p.m., when 63 members were present.

The *Minutes* of the Ordinary Meeting held on May 13th, 1955 were confirmed and signed by the President.

Elections.—The following candidates, having been proposed and seconded, were elected to membership :

Fellows : Drs. H. V. Illing and E. P. Griffiths.

Address : Humphrey Francis Humphreys, Esq., O.B.E., M.C., T.D., M.B., CH.B., M.D.S., F.D.S., F.S.A. (Vice-Chancellor, Birmingham University, 1952–1953), then delivered an address, in which he covered a very wide field of observations, made during service in under-developed countries during two world wars, of the effects of environmental and social conditions on the health of primitive peoples. He reckoned nutrition as the paramount factor in building up health and resistance to disease and pointed to the parts being played by university research departments in increasing food production. The voluntary limitation of population increases and its connection with standards of living was also discussed.

After general discussion, Dr. H. D. Chalke proposed a vote of thanks to the speaker and the meeting terminated.

PRELIMINARY NOTICE OF SEPTEMBER ORDINARY MEETING

At the Ordinary Meeting of the Society to be held on Thursday, September 22nd next, at 5.30 p.m., in Apothecaries Hall, Black Friars Lane, Queen Victoria Street, London, E.C.4, Dr. Charles F. White, O.B.E., Medical Officer of Health, City of London, will be installed as President of the Society for the Session 1955-56, and will deliver his Presidential Address.

HOME COUNTIES BRANCH

President: Dr. J. W. Starkey (M.O.H., Kingston-on-Thames and Divisional M.O., Surrey C.C.).

Hon. Secretary: Dr. J. Maddison (M.O.H., Twickenham, and Area M.O., Middlesex C.C.).

A meeting of the Branch was held on Friday, February 11th, 1955, at the London School of Hygiene and Tropical Medicine. The President was in the chair and the Honorary Secretary and 40 members attended.

W. M. Levitt, Esq., M.D., F.R.C.P., F.F.R., D.M.R.E., director, Department of Radiotherapy, The London Clinic, gave an address, illustrated by lantern slides, on "Health Hazards in the Atomic Energy Age". (This will be published in a later issue of PUBLIC HEALTH.)

Dr. F. G. Brown reported on the discussion which had taken place at the November Group meeting concerning the future of the Tuberculosis Group. He said that in order to stimulate interest in the Group, it had been decided that Branch representatives on the Group Committee should raise the matter in their branches with a view to arranging discussions on tuberculosis subjects and to suggest that medical officers of health might approach members of the tuberculosis service in their areas to show them that the Society still has something to offer them. It was agreed to support the Tuberculosis Group on the lines suggested and, if possible, the Branch would hold one meeting a year at which a tuberculosis subject would be the main item for discussion.

The Honorary Secretary reported that Dr. K. E. Tapper, O.B.E., formerly Medical Officer of Health, Borough of Bromley, who joined the Society in 1920, was eligible for Life Membership of the Society, and it was unanimously resolved that he be recommended for nomination by the Council of the Society as a fully paid Life Member.

MIDLAND BRANCH

President: Dr. J. W. Pickup (C.M.O.H., Worcestershire).

Hon. Secretary: Dr. W. R. Martine, O.B.E. (Admin. M.O.H., Gen. Purposes, Birmingham).

The third meeting of the session was held at Lancaster Street Welfare Centre, Birmingham, on Thursday, December 2nd, 1954, at 3.0 p.m. The President was in the chair and 39 members attended.

Laundry Facilities for Tuberculous Patients. A letter of enquiry from the Administrative Officer was read and it was agreed that all member M.Os.H. should be asked to submit their observations upon the facilities available in their areas and upon the need for such facilities.

Administration of the Anti-tuberculosis Scheme.

Dr. T. O. P. D. Lawson (M.O.H., Cheltenham, until recently M.O.H., Dudley) and Dr. A. Gordon Evans (Chest Physician, Coventry) gave short papers on "The Combined Operation".

Dr. Lawson began by emphasising the need for collaboration between M.O.H., Chest Physician and Director, Mass Radiography Unit, if prevention of tuberculosis was to result, and he believed that notwithstanding division of responsibility the patient had not been the loser since 1948 through the collaboration of these three and the general practitioner. The new designation, Chest Physician, had in fact led to fresh impetus to the diagnosis and treatment and nothing had happened since 1948 to prevent vigorous attention to prevention on the part of the M.O.H.

Dr. Lawson outlined how his Local Health Authority had undertaken routine tuberculin jelly testing in 1952 of all school entrants. He was convinced that this was the most practicable test for survey work in this age group. School medical officers had received special instruction to ensure uniformity of technique and interpretation. Teaching staff had co-operated and no parent had objected. Where any doubt existed at reading on the fourth day the child was referred to the Chest Physician for Mantoux test subject to the parents' consent. Where positive, the home was visited and the positives were given an appointment at the Chest Clinic, the parent being invited to take any other children under 14 years of age; the rest of the family being offered appointments at the Mass Radiography Unit. Any child requiring observation or treatment was notified to the general practitioner, and thus the collaboration of all concerned was complete.

In Dudley, school leavers and ante-natal mothers attended the Mass Radiography Unit as routine and, finally, since September, 1954, B.C.G. vaccination had been carried out in school leavers. All children with a positive Mantoux were *x*-rayed (M.M.R.) and similar facilities offered to others in the home as with positive jelly test contacts.

The Chest Physician must be brought fully into the scheme and Dr. Lawson pointed out that he was not employed wholetime by the R.H.B. He earned every penny of the meagre proportion of his salary paid by the L.H.A., though collectively his salary might be adequate—it was in effect a striking example of prevention being cheaper than cure. There was still a tendency to treat tuberculosis as something to be hidden, but the attendance of general practitioners' patients at Chest Clinic Sessions, i.e., chronic chests, had led to the detection of many cases.

The fullest use of M.M.R. should be made, not necessarily more intensive, but more intelligent. The unit could be kept busy by M.O.H. and G.P. and while certain groups should still be mass surveyed, general mass survey was not the best use. The 70 units in England and Wales could not cover the country, and while costly, the unit was surely a sounder investment than many others in our Health Service.

Dr. Gordon Evans, referring to the M.O.H's loss of responsibility for diagnosis and treatment of tuberculosis, said he believed that prevention was at least of equal importance and that having left this with the M.O.H. the Ministry had surely paid tribute to previous preventive work.

We had been dilatory in this sphere of prevention in this country. We could, however, safely assume that the original work on contacts, now extended to school leavers, would continue a responsibility of the L.A. medical staff.

There were certain clinical problems involved. First, the use of B.C.G. or Vole Bacillus. Both had a similar conversion rate, but the latter had been found to give quite serious late lupoid reactions up to two years. He had also found axillary abscesses in 45% of intradermal vole cases, as against 1.3%. Outlining the procedure adopted in Coventry Dr. Evans said he had had surprisingly few complications but he had found intracutaneous injection essential. Subcutaneous was more likely to lead to axillary adenitis. In some cases there developed a deepish ulcer at the site of inoculation. Even if this continued to discharge after six to eight weeks it healed with an application of 10% P.A.S. paste in most cases—if more troublesome a streptomycin ointment had proved effective. Axillary adenitis was less common than inguinal, usually subsiding slowly but giving no major disability. He gave clinical details of two such cases and also of a case of skin reaction in a nurse subject to skin allergy. It was inadvisable to give B.C.G. to such a subject. He also referred to an infant with meningitis, which responded to streptomycin but was subsequently shown not to be tuberculous. He had not, in fact, met a case of tuberculous meningitis following B.C.G. Out of 1,000 vaccinations he had only found three revaccinations required — two after three months and one after three years. Finally all vaccinated were *x*-rayed after the final Mantoux at eight weeks, and while he had noted one or two suspicious shadows, all had proved to be transient in nature.

Dr. Evans strongly advocated the preliminary Mantoux test in school leavers or a Heaf multiple puncture test, feeling the jelly test to be unreliable, and held that retesting of a 10% sample subsequently would be an adequate check with the conversion rate having been found so satisfactory. It was important to get positive reactors *x*-rayed and as a preventive measure he felt the *x*-ray of school teachers important.

The M.M.R. unit should have the closest liaison also with the Hospital Service, for in addition to tuberculosis there are the bronchial carcinoma, bronchiectasis, hearts, etc.

Lastly, Dr. Evans referred to the value of the Health Visitor having the closest liaison with the Chest Clinic—the Chest Physician did not wish to steal the H.V. but the relationship should be even closer than it was at present.

Drs. Wilson, Paul, Tabbush, J. R. Preston, Martine, Dison, Bramwell, Hallum and J. F. Galloway took part in the ensuing discussion and the meeting closed at 4.35 p.m. with a vote of thanks to the speakers proposed by Dr. Stewart, seconded by Dr. Ring.

NORTHERN BRANCH

President: Dr. A. B. White (Sen. Cons. C.P., Sunderland).

Hon. Secretary: Dr. W. S. Walton, G.M. (M.O.H., Newcastle upon Tyne C.B.).

A meeting of the Branch was held at the Medical School, King's College, Newcastle upon Tyne, on Thursday, February 3rd, 1955, at 4.30 p.m. No formal business was conducted.

An attendance of 36 members, together with some 70 guests, was addressed by Professor A. W. G. Ewing and Mrs. Ewing of Manchester University on:

Screening and Diagnostic Tests of the Hearing of Pre-School Children.

In opening his address Professor Ewing compared the treatment of deaf children some forty years ago with the position to-day. Whereas formerly, little differentiation was made in the treatment of children with varying degrees and histories, great advances have since been made as the problems have become more fully understood and now, in place of overall institutional treatment, there are schools for the partially deaf and even grammar and secondary technical and nursery schools.

Between 70—80% of deaf children are discovered before the age of two under present procedure, but ascertainment is not complete until about seven years. Partially deaf children do not progress normally and their defect upsets their emotional and mental development.

He then discussed various tests of deafness developed through the Medical Research Council and was most interesting in his description of how a baby learns to listen, how at four months it can discriminate tones and voices associated with care and security, and at nine months it is able to locate the sound and the distance it has travelled. It is also able to discriminate and will ignore some sounds altogether.

He stressed that although 80% of deaf children are discovered before the age of two, no help is given until the child is five years old, although facilities are available for complete ascertainment. A large percentage of these children could be treated, and it seemed to him a matter of urgency that full ascertainment and treatment should follow immediately upon discovery of deafness. A further aim was the prevention of deafness and he stated that a research project on these lines was being carried out, in which hospital, university and local authority services, were playing a part.

Mrs. Ewing next described from personal experience the importance of the manipulation of range when using a listening aid.

She then briefly described the diagnostic tests used at their clinic given to a child known to be deaf to ascertain the level and range. The importance of the parent in the teaching of a child to lip read and to hear with a hearing aid was also stressed. Mrs. Ewing's sincerity and her sense of vocational interest greatly impressed all her hearers.

In moving a vote of thanks, the President, Dr. A. B. White, stated that he could not recollect a more moving address to the Branch. Members were greatly indebted to Professor and Mrs. Ewing and he very much regretted that time would not permit the many questions which members would have liked to ask. Professor Ewing replied suitably.

WELSH BRANCH

President: Dr. Amy L. Jagger (A.C.M.O.H., Glamorgan).
Hon. Secretary: Dr. R. T. Bevan (Dep. M.O.H., Glamorgan).

A joint meeting of the Welsh Branch of the Society and the West of England Industrial Medical Officers was held at B.M.A. House, Cardiff, on April 1st, 1955. The total attendance at the meeting was 40.

The President of the Welsh Branch welcomed the Industrial Medical Officers and expressed the hope that this would be the first of many joint meetings. The President introduced the three speakers: Dr. Atkins, an Industrial Medical Officer, Mr. J. G. H. James, Orthopaedic Surgeon, and Mr H. Bradley, of the British Boot, Shoe and Allied Trades Research Association.

Foot Hygiene.

Dr. Atkins opened the discussion on the above subject and pointed out that civilised feet had gone a long way in development or retrogression from the times of early man. The feet of primitive tribes today differed considerably from those of the more developed races due, no doubt, to the differences in requirements. The feet of primitive tribes were more effective and were better able to grip the ground. Modern man had no need to chase his food or his mate on his feet.

He pointed out that there was comparatively little knowledge of the extent of foot problems. Recruitment to the 1914-18 war drew attention to the incidence of foot deformities and resulted in large numbers of men being fit only for non-combatant duties. There had been no comprehensive surveys carried out in industry but it was his impression that foot deformities were responsible for a considerable loss of efficiency and loss of working time, particularly near the end of the industrial life of a worker. Inadequate foot wear of industrial workers led to accidents but what was more important to minor abnormal foot conditions impairing efficiency. Dr. Atkins also spoke of his experiences in the R.A.F., making particular reference to skin conditions of the feet.

Dr. Atkins urged that individuals should dispense with foot wear whenever possible and that further research should be carried out with a view to improving the ventilation of industrial boots, e.g., use of perforated metal instead of solid metal protections. He suggested that an alternate to rubber should be sought.

In considering foot hygiene attention should also be paid to factory floors, e.g., removing oil.

It was also suggested that man was a victim of fashion in the design of footwear and in this respect it was stated that the adolescent period was important because it was at that time that the demands of fashion were first made apparent. Cramped toes led to sweating and infection with fungi. Defective blood circulation could produce skin breakdowns. Shrunken socks could produce similar effects to tight shoes and boots.

The increase in pit-head baths had resulted in a greater incidence of epidermophytosis and here Dr. Atkins felt that too little importance had been attached to the laundering of socks. He stated that the miner rarely had his socks washed but wore them until they fell to pieces. He concluded his remarks by stating that industry could not afford to ignore the problems of foot hygiene even if they did not present themselves in a dramatic way.

Mr. J. G. H. James stated that young people were referred to him because of their foot defects in a number of ways—by school authorities because of a deficiency in the function of the feet, by parents when they noticed that there was an abnormal wearing out of the child's shoes or because of an obvious defect in walking. Pain in the feet was sometimes the presenting symptom. Mr. James considered that bad foot wear made any foot disorder worse. He described the condition of spasmodic flat foot associated with peroneal spasm and an everted foot. It was considered that the crippling effects of flat feet came after 20 years of age. The cause of a spasmodic flat foot was said to be due to a bony tarsal anomaly. The abnormal position produces spasm and eventually arthritic changes. Fatigue fracture of the neck of the second metatarsal was compared to fatigue in metal under constant stress. In this condition the laying down of new bone could sometimes be noted before the fracture became apparent.

Pain in the forepart of the foot was sometimes caused by osteochondritis of the head of a metatarsal due to vascular disturbance of no known cause. A metatarsal bar would prevent pressure on the joint and the bone would return to its normal condition.

Mr. James also referred to the influence of fashion on shoe design and stated that the public would get what they wanted even if this were not physiologically ideal.

Mr. H. Bradley said it was the aim of the boot trade to produce foot wear which was comfortable, healthy, pleasing to look at and protective at a reasonable price. A shoe should fit, be orthopaedically satisfactory and be physiologically comfortable. He pointed out that there was a need for education of the public in their demand.

To obtain a shoe to fit was not easy because the interaction between the foot and the shoe was complicated. The trade required to know statistical detail of the foot population.

A survey of the feet of school children carried out in the West Riding of Yorkshire was described. It revealed that a large percentage of the children were wearing shoes which were too short. The shoe trade carried out extensive investigations to produce satisfactory lasts. As a result, a series of model lasts were made available and are known as "Satra" lasts. Similar surveys had been carried out with a view to obtaining model lasts for women's feet. One of the problems to be determined was related to the optimum rigidity of shoes. Hypermobile feet tended to roll inside a shoe with a corkscrew action and there was the possibility of the shoe losing its shape. The structure of a shoe varies with its purpose.

It was essential that foot wear should not be orthopaedically harmful. Research had been carried out in women who spent long hours on their feet—waitresses and shop girls. An extensive survey with hospital nurses had had to be postponed because of the onset of war in 1939. However, the experiences of the armed forces had been of considerable value in the trade's objective to provide better shoes and boots.

In the discussion which followed one speaker referred to the incidence of foot infections in the armed forces during the war. The incidence appeared to be related to communal bathing and to climatic conditions. Eczema of the feet could be due to chemicals as well as due to fungal infections.

Professor Grundy referred to the foot survey carried out in Luton when it was noted that 37% of people had some foot trouble. There was a steadily increasing prevalence up to the age of 65 years of defects involving the anterior foot. Pain due to flat feet occurred at all ages but in any particular individual lasted only three to four years. Professor Grundy again emphasised the need for more detailed research. There was also a need to educate the public by simple rules of foot hygiene.

Dr. R. T. Bevan moved a vote of thanks to the speakers and thanked the Industrial Medical Officers for their co-operation in arranging the joint meeting.

YORKSHIRE BRANCH

President: Dr. C. G. K. Thompson (M.O.H., Wakefield C.B.).
Hon. Secretary: Dr. H. L. Settle (M.O.H., Doncaster C.B.).

A meeting of the Branch was held on Tuesday, March 29th, 1955, at Lofthouse Pit, near Wakefield.

A small party of members, including two ladies, descended Lofthouse Pit for a tour of the underground workings. The party was taken by diesel train from the shaft bottom to the coal face, a distance of one and a half miles. There they saw the coal seam and were able to observe the conditions under which miners have to work. On return to the surface we were shown the winding house, engine rooms, pit-head baths, medical centre, etc., and were then entertained to refreshments in the canteen.

This was a most enjoyable visit and the President voiced the thanks of all members to Dr. G. E. MacAlvey, C.B.E., D.S.O., M.C., Medical Officer, No. 7 Area, North-Eastern Division, National Coal Board, and the colliery officials who had acted as our guides and who contributed so much to the interesting time we had spent.

COUNTY DISTRICT GROUP

President: Dr. F. W. Campbell Brown (M.O.H., Hyde M.B.).
Hon. Secretary: Dr. G. H. Pringle (M.O.H., Worthing M.B.).

Annual Meeting, 1955

The Annual Meeting of the Group was held at the Grand Hotel, Bournemouth, on Thursday, April 28th, at 8.0 p.m. The President was in the chair, and there was an attendance of 130 members. Dr. F. Hall, Medical Secretary of the Society, and Mr. Bragg, Administrative Officer, also attended.

The minutes of the previous Annual General Meeting (April 29th, 1954) having been circulated to all members of the Group, were approved and signed.

President's Report. The President reviewed the work undertaken by the Executive Committee during the year. The proposed Manchester meeting which it was hoped to hold in the autumn had to be cancelled initially owing to an important meeting of local authorities in the North-West Region and later owing to the difficulty of obtaining the premises and speakers originally envisaged. This year it was proposed to hold a Refresher Course in September in London, and preliminary plans were already under consideration. He referred to the increasing activity of some of the Sub-Groups, although this was by no means universal, and it was hoped that the less active Sub-Groups would be able to arrange more frequent local meetings in the coming year. Finally, he mentioned the resignation of Dr. G. H. Pringle, the Honorary Secretary, and thanked him for his services first as Assistant Secretary and subsequently as Secretary during the past five years.

Report of Honorary Treasurer. The Honorary Treasurer's Balance Sheet was submitted and approved.

Election of Officers, 1955-56. The following Officers were elected for the year 1955-56:—

President: Dr. J. Menzies Cormack (M.O.H., S. Gloucestershire C.Ds).

Vice-President: Dr. J. Alun Evans (M.O.H., Bridgend & Porthcawl U.Ds).

Hon. Secretary and Treasurer: Dr. W. Alcock (M.O.H., Watford M.B.).

Hon. Assistant Secretary: Dr. J. H. Hudson signified that he did not wish to continue in office and it was therefore resolved that the question of filling the vacancy be referred to the Executive Committee.

Executive Committee. The membership was decided as follows:—

(a) *Ex officio*: The President, Vice-President, Honorary Secretary and Honorary Assistant Secretary.

(b) The following members, having been nominated by Sub-Groups, were elected:—

Sub-Group.	
Northern	Drs. L. A. M. Johnston and H. J. Peters.
North-Western	Drs. R. E. Robinson and J. G. Hailwood.
Yorkshire	Dr. E. Ward.
Midland	Drs. J. R. Preston and C. E. Jamison.
East Midland	Dr. G. G. Buchanan.
East Anglian	Drs. Irene Green and P. A. Tyser
Home Counties	Dr. F. G. Brown.
Welsh	Dr. J. Alun Evans.
West of England	Dr. A. M. McCall.
Southern	Drs. D. J. N. McNab and E. J. Gordon Wallace.

(c) In addition it was unanimously agreed that the names of Drs. Campbell Brown, Kershaw, Pringle and Stirling be added.

(d) *Representation on the Council, 1955-56.* Dr. J. M. Cormack (the President) and Dr. W. Alcock (the Honorary Secretary) were recommended by the Executive Committee, and this recommendation was approved.

Notifiable Disease: Report of Special Sub-Committee.

A long discussion took place on this report, and it was finally decided that the matter should be dealt with by the Executive Committee, subject to the Committee giving consideration to the following points:—

(i) Notification of puerperal pyrexia and Ophthalmia neonatorum should be retained.
(ii) Notification of brucellosis, Weil's disease and infective hepatitis should be considered.
(iii) Notification of acute primary and influenzal pneumonia should be retained.
(iv) Notification requirements should be brought into line with current practice and current necessity.

It was further suggested that Sub-Groups should meet and discuss the subject, and the Honorary Secretary stated that he would be glad if suggestions and comments could be sent to him not later than July 1st.

Matters for General Discussion.

The following matters, most of which had been put forward by Sub-Groups, were discussed:—

(1) It was considered that decentralisation as envisaged in Circular 118 is not being properly carried out, and it was resolved that the Executive Committee be asked to draft a suitable statement for the consideration of the Council.
(2) The wording of advertisements for combined appointments.

Refresher Course. The Honorary Secretary reported that the next Refresher Course would be held in London from September 22nd—25th.

Honorary Assistant Secretary: Dr. Parfitt referred to the resignation of Dr. Hudson, the Assistant Secretary, and on behalf of the members thanked him for his services, particularly with regard to the organisation of Refresher Courses.

MATERNITY AND CHILD WELFARE GROUP

President: Dr. Hilda Davis (Sen. M.O., M. & C.W., Buckinghamshire).

Hon. Secretary: Dr. Mary Paterson (Deputy Div. M.O., M. & C.W. & Schools, L.C.C.).

Hon. Assistant Secretary: Dr. Joyce Marshall (M.O., Div. 3, L.C.C.).

The Group held a general meeting in B.M.A. House on February 5th. Thirty-nine members were present. The President was in the chair, and introduced the speaker, Dr. V. Mary Crosse, O.B.E., paediatrician and lecturer in Child Health and Paediatrics, University of Birmingham, who spoke on:

The Early Diagnosis of Cerebral Palsy.

Dr. Crosse said that the study of premature babies and their disabilities had led to an investigation of kernicterus of prematurity. This condition, like kernicterus due to haemolytic disease, results in cerebral palsy. In haemolytic disease, kernicterus now rarely occurs if replacement transfusion is used to remove the excess of bilirubin. It is known that the serum bilirubin rises to higher levels in premature babies than in mature babies and, once a critical level has been ascertained,

and a simple and quick method of estimating bilirubin levels in a small quantity of blood has been perfected, it should become possible to prevent kernicterus of prematurity by replacement transfusions, and so prevent many cases of cerebral palsy.

Cerebral palsy may be caused before, during or after birth, e.g., cerebral agenesis, birth injury and asphyxia, neonatal jaundice (due to haemolytic disease or due to prematurity), infections of the central nervous system, cerebral tumours, head injuries or hereditary forms.

The incidence of cerebral palsy is three or four times that of blindness, it is equal to that of deafness, and greater than that of crippling due to poliomyelitis. It has been estimated that there is one case of cerebral palsy for every 1,000 children of school age.

The prognosis in any case of cerebral palsy depends largely on the damage to other parts of the brain, i.e., on the mental development, the presence or absence of fits, deafness, visual field defects, etc., but correct handling in the early plastic stages can do a great deal to reduce the disabilities and early treatment is only possible if diagnosis is early.

The majority of cases show signs at, or shortly after, birth, i.e., birth asphyxia, signs of increased intracranial pressure, cyanotic attacks, breathing and sucking difficulties, meningitis, haemolytic disease, kernicterus of prematurity (signs of which are jaundice, anorexia or vomiting, head retraction, eye rolling and alterations in muscle tone occurring between the fourth and eighth day of life). A baby showing any of these signs (however transitory) should be regarded as a potential case of cerebral palsy and followed up carefully. Because many of the babies who later develop signs of cerebral palsy make a good recovery from the initial illness, and appear to be normal for the first few months of life, they should be followed up for at least one year before cerebral palsy is definitely excluded. It is obvious that co-operation with the Child Welfare Centres is necessary if all such babies are to be followed up in this way.

A lucid demonstration of the tests employed and the physical signs to be sought, was then given on a dummy baby. Dr. Crosse advised that a normal baby should be tested as a control in every case.

Questions and discussion followed.

In proposing a vote of thanks to the speaker, Dr. Elspeth Warwick expressed the appreciation of the meeting for the outline of her original work on this subject given by Dr. Crosse, which will enable the diagnosis to be made within the neonatal period and preventive measures employed. This was warmly applauded.

A general meeting of the Group was held in Committee Room C, B.M.A. House, on Friday, March 4th, 1955, at which Dr. Russell Grant, consultant in physical medicine, Winchester Group Hospitals, gave a talk on the following subject:

The Rehabilitation of the Physically Handicapped in Their Own Homes.

Dr. Grant described the organisation of a scheme in a country district, where long distances have to be covered, and infrequent 'bus services lead to travel difficulties and to long periods of separation from home or absence from work. The former affects the chances of treatment for housewives, and mothers of young children particularly, as a treatment session implies many hours absence from home.

The determination of the sites for the centres depends on many local factors such as the flow of transport, the patient-population density, the situation of the *x*-ray and pathology services.

The requirements for treatment consist of a physiotherapy department with hydrotherapy in the form of a hot pool, and the place of the usual occupational therapy department is taken by a Daily Living Department comprising kitchen, bathroom, bedroom and living-room, so that the housewife's day may be reproduced as nearly as possible. There are also provisions for suitable forms of remedial occupational therapy. The emphasis in treatment is on function, including mobility about the house, independence for the patient with regard to the function of daily living. Physical treatment is considered from these aspects. Physical medicine, occupational therapy and rehabilitation are integrated to obtain the best advantages of each.

The equipment for these departments was then described and slides shown to illustrate how much of this may be constructed locally, thus saving expense and ensuring that the apparatus is designed to meet the particular need as simply as possible.

The Almoner to the department shares, with the rest of the staff, the aim of getting the patient back into his own home. The resettlement clinic is run for this purpose. The chronic sick person who is in hospital or in bed in his own home, often becomes so incapacitated that a wage earner has to be retained to look after him if he is discharged, often making the chronic sick hospital inevitable, and the first task is to render the patient mobile again so that he can get out of bed, feed himself and go to the toilet.

The modifications of bed, chair and toilet facilities and of other household equipment can be carried out simply and without much expense. The department has illustrated pamphlets to demonstrate this, which were distributed at the meeting, and slides were shown.

A scheme was described centred on the parish, whereby use was made of the appropriate voluntary bodies for providing the necessary alterations to furniture, etc., in patients' homes. A simple leaflet was prepared showing, photographically, how these modifications could be carried out. This scheme has been in operation for some three years and is now functioning economically and efficiently.

The department serves people of all ages, children as well as old people, chronic conditions such as disseminated sclerosis, as well as post-operative and injury cases. The hope of becoming useful again is a powerful incentive towards recovery, or to adaptation to the handicap. Many patients have been restored to independence and usefulness in their homes, and this was illustrated by the cases described.

One bedridden invalid who could use her arms and hands has been provided with a mobile kitchen, fitted to a wheeled trolley, so that she can prepare and cook a meal at her bedside ready for the rest of the household when they return from work at the end of the day. She achieves social usefulness and is restored to a place in the community.

Dr. Grant then replied to questions and an interesting discussion followed.

A vote of thanks was proposed by Dr. Waddington and carried unanimously.

SCHOOL HEALTH SERVICE GROUP

President: Dr. W. J. Pierce (Sen. S.M.O., Northumberland).

Hon. Secretary: Dr. A. A. E. Newth, O.B.E. (formerly P.S.M.O., Nottingham).

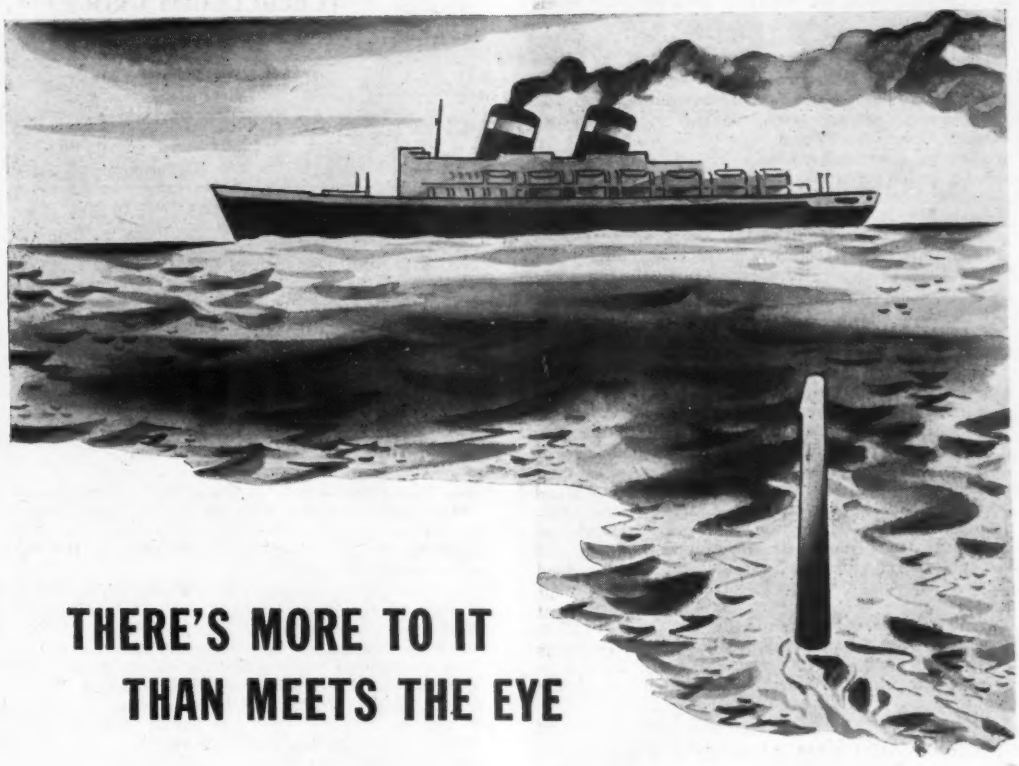
Asst. Hon. Secretary: Dr. J. D. Kershaw (M.O.H. & Divl. S.M.O., Colchester).

An ordinary meeting of the Group was held in Committee Room C, B.M.A. House, on Friday, January 21st, 1955, at 4.30 p.m. The President, Dr. W. J. Pierce, was in the chair, and 30 other members were present.

New Members. The following fellows of the Society were elected as members of the Group: Drs. Alexander Cameron (North Riding C.C.), Catherine Coutts Milne (Norfolk C.C.), Raymond J. Donaldson (Stoke-on-Trent), Kate Gray (Birmingham C.B.), Edmund M. Hamilton (Surrey C.C.), J. A. Linden (L.C.C.), R. Machell (Perthshire), Lewis B. Peters (Brighton C.B.), Arthur L. Thrower (L.C.C. and Islington) and Alfred Yarrow (Middlesex C.C.).

Hon. Secretary's Report. The Hon. Secretary reported that since the last Ordinary Meeting on October 22nd, 1954, a very successful Joint Meeting had been held with the Medical Officers of Schools Association on November 26th. Council meetings had been held on November 26th and on January 22nd. In collaboration with the M.&C.W. and Dental Officers Group a joint memorandum on the memorandum of the B.D.A. on the Dental Health of Children had been drawn up for submission to the B.M.A. The Council had considered carefully the suggestion of the Council of the Society that in collaboration with the M.&C.W. Group the proposed Training Course for Newly Appointed S.M.O.s might include M.&C.W. work, but they had thought that this was not feasible and it was proposed to proceed with the exploration of holding the first course in Bristol in September, 1955. A more detailed syllabus had been drawn up, but it would not be possible to make more definite arrangements until the matter had been further considered by the General Purposes Committee of the Society to which it had been referred. Dr. Paterson, the Honorary Secretary of the M.&C.W. Group had attended the Council Meeting of the Group on January 22nd to explain the concern the Group was feeling over the health and welfare of children in certain

(*Continued on page 166*)



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5176

GUILDFORD SURREY

SCHOOL HEALTH SERVICE GROUP

(Continued from page 164)

private nurseries and nursery schools; the Council of the Group resolved to support their colleagues in any action that might seem appropriate. Dr. Sylvia Macmillan had been nominated to represent the interests of the Group on the Working Party of the Research Committee of the Society.

Dr. Morrison had expressed a wish to resign from the Council of the Group on his resignation as S.M.O. for Derby County Borough, but the Council had unanimously asked him to reconsider the matter. It was with great regret that the Council had heard that Dr. C. W. Anderson had asked to be relieved of his duties as Assistant Hon. Secretary on account of his numerous obligations as Deputy M.O.H., Cardiff; the President expressed his great appreciation of all that Dr. Anderson had done for the Group; Dr. Kershaw agreed to fill the vacancy for the remainder of the session. The Council had considered the questionnaire prepared by the Salaries Committee of the Society and had decided that all the members of the Group should be given an opportunity to express their opinions by post, and the matter was deferred for the next Council meeting.

Dr. A. P. M. Page, consultant paediatrician, City of Nottingham Education Committee, read a paper on "Significance of Heart Murmurs in School Children" from the point of view of one who had to advise the School Health Service of a large County Borough about school attendance of the child with suspected valvular disease of the heart and on the amount of physical activities which should be encouraged. During the discussion that followed, the questions and comments ranged over a wide field showing the deep interest which the speaker had aroused.

New Members of Council. At its meeting on November 26th, 1954, the Council of the Group unanimously resolved to co-opt Dr. C. C. Elliott of Cornwall C.C. and Dr. F. B. Shevlin of York C.B. onto the Council under Regulation 13(e) of the Constitution.

S.H.S. MIDLAND SUB-GROUP

President: Dr. C. Starkie (M.O.H., Kidderminster & Divl. M.O. Worcestershire).

Hon. Secretary: Dr. M. E. Lemin (Dep. P.S.M.O., Birmingham).

This Sub-Group has held within the last year a series of meetings at which it has been the endeavour of the Committee to bring to the notice of the members a number of subjects which would prove of interest in the work of the School Health Service. It was felt that it would be useful from time to time to meet our colleagues in the Maternity and Child Welfare Sub-Group and therefore, at the meetings held in March and July of last year, the two sub-groups joined.

At the meeting on March 20th, 1954, we had the pleasure of hearing Dr. Mary Sheridan who spoke on "The Problem of Child Neglect" and discussed the facilities in the special homes where the mothers who find that life has got beyond them can be helped. This talk aroused considerable interest as it is these very problems that are so constantly with us all in our work.

On June 26th, 1954, the two Groups met again on what was partly a social occasion. It has been the custom for the past three years in the School Health Service Sub-Group to make the summer meeting both a clinical and social one, where in the afternoon some matter of clinical interest may be discussed and the evening given up to a social function. On this occasion we were privileged to visit Kyre Park Hospital where we had an interesting talk from Dr. Geddes on "Tuberculosis and Chemotherapy" and after this a visit to the wards, where cases were discussed at the bedside. The Matron was good enough to ask the two sub-groups to tea, and later the members and their guests met at the Elms Hotel, Abberley, where they dined together. On this occasion some 26 members of the sub-group and their guests attended.

In the preceding year, 1953, the autumn meeting was held at the Martineau Teachers' Centre when two of the members gave talks; one by Dr. J. Owen on "Audiometry in Schools," with a demonstration of a portable audiometer, and Dr. Jones, of Coventry, gave a talk on "Child Welfare in the Union of South Africa." After each of these meetings the interest roused by the subjects is markedly demonstrated by the keenness of the discussion, and in spite of the distance that some of the members have to travel, it is special to note that over the last 12 months there has been an excellent average attendance.

TUBERCULOSIS GROUP

President: Dr. J. Wood-Wilson (C.M.O.H., West Riding).
Hon. Secretary: Dr. J. G. S. McQueen (C.P., Battersea).

Acting Secretary's Report, 1954-55.

The Committee of the Group held four meetings during the year on May 21st, September 24th, November 19th, 1954, and February 18th, 1955.

On all these occasions the organisation of the tuberculosis service came under discussion at some point in the proceedings and as time went on, the value and function of the Group itself began to receive attention, since it was clear that the diminishing membership through new recruitment failing to keep pace with resignations presented a serious threat to the survival of the Group. Members referred the matter to their local branches and tuberculosis societies and, on the whole, it was met with sympathetic consideration, though it was generally felt that associate membership of the Society at a reduced fee was an undesirable means of attracting new members. These moves in the regions did, however, have the useful effect of emphasising again at Branch level the importance of tuberculosis in the field of public health and many branches reaffirmed their practice of including in their annual programme items having a definite bearing on some aspect of the tuberculosis service. This question of the future of the Group still needs urgent consideration and adequate time will be given to this in future meetings of the Committee to ensure that what has proved to be a useful advisory instrument in the past may continue to make its full contribution in the fight against tuberculosis.

In addition to these general matters which were dealt with at each of the four meetings of the Committee, at the May meeting the various items discussed included the non-notification of tuberculosis and the employment of domestic helps. The question of non-notification was further considered in September and other matters then included publicity in the journal of the Society, the home nursing of tuberculosis, the training of health visitors and liaison with the maternity and child welfare service in contact tracing. The latter question received further attention at the November meeting. In February the Committee considered the memorandum on salaries in the public health service and made a recommendation to Council that salaries of Medical Officers of Health should be related to those in consultant medicine and not to those in other branches of the local government service. A report was considered from the Council representative on the position of nurses undertaking duties outside their normal scope and it was noted that the Royal College of Nursing memorandum recommended, among other things, that a nurse should not be required to vaccinate with B.C.G.

At each meeting of the Committee reports were presented by representatives on the Council of the Society and on the Joint Tuberculosis Council, again emphasising the value of the Group as a means of liaison between various bodies engaged in the field of tuberculosis.

Tuberculosis still presents a predominant challenge to those engaged in preserving the health of the nation. Any divisive element is a weakness in the answer to this challenge. The Act of 1948 produced a split in the tuberculosis service and this split has steadily widened with results that can only be to the detriment of the service as a whole. The Tuberculosis Group of the Society performs a useful task in bridging the gap between public health department and chest clinic. It will require the continued interest and goodwill of all members of the Society if the Group is to retain the vitality which will enable it to continue to fulfil this important function in the future.

DENTAL OFFICERS GROUP

President: Mrs. A. S. Wylde.
Hon. Secretary: Mr. J. F. A. Smyth (Principal S.D.O., Gloucestershire).

General Anaesthesia in Children's Dentistry

A meeting of the Group was held at Tavistock House, on Saturday afternoon, May 14th, 1955, at which a talk on the above subject was given by Dr. R. J. Clausen, M.C., M.B., F.F.A., D.A., Senior Anaesthetist, Charing Cross Hospital. Dr. Clausen said that he had first given nitrous oxide gas for dental extractions as a student as the old Westminster Hospital. They had three gallon rubber bags and cylinders on the floor. There was then no mention of the nasal method of administration and the signs of anaesthesia were taught as being stertor, cyanosis and jactitation. We now knew that all three were better avoided.

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One should stop short of the first and avoid the other two at all costs. These three signs were evidence of oxygen lack. Another manifestation of the same thing was hortation, crying out. This could be silenced by giving more oxygen. The psychological state of the patient had a great effect on the smoothness and success of an anaesthetic. When the nasal method of administration was introduced much better results were obtained. It was much more pleasant for the patient. Induction was quicker and anaesthesia could be prolonged. If children had colds they should be told to blow their noses, but most children would go off very well with purely nasal gas. If necessary, the nose-piece could be slipped down over the mouth and when the patient was under it could be slipped up over the nose again. One thing he had learned from a young dentist was that you should never use the words "gag" or "mask" in front of the patient. Both words were associated with unpleasant or criminal activities and were best avoided. Modern nitrous oxide and oxygen anaesthetic machines were used with controllable pressures. He liked to use from two to five per cent. of oxygen from the outset especially with small children. If things were going well the nose-piece could be removed two or three teeth from the end of the operation, thus hastening recovery. Nitrous oxide was once said to be unsuitable for very young children and ethyl chloride with a closed inhaler was used, but the after-effects were bad. Later vinesthine was said to be the best dental anaesthetic for children in the dental chair. In some clinics he found trilene bottles on the anaesthetic machines.

In the early days mouth packs were looked upon askance—even as a reflection on the skill of the operator. Now they were routine practice. He favoured a single strip of plain white gauze rolled up at one end into a semi-circular pack, the loose end of which could be used for mopping up. He did not like the Masons gag and thought it best to put a prop in on the other side. He sometimes wondered whether these "wholesale" gas sessions were really necessary at all. On the Continent general anaesthesia was seldom used in the dental chair. Should there really be such frenzy and urgency as was often found at "gas" sessions? As regards meals before "gas" appointments, classically the patients should fast, but he thought there could be little harm in a light breakfast, not later than 8 a.m. if the session started at 9.30 a.m. There was little harm in a light snack two or three hours beforehand. He had only dealt with general anaesthesia in the dental chair for ordinary extractions, for prolonged operations the anaethetic requirements were just the same as for any other operation.

In the discussion which followed Messrs. Oliver, Britten, Taylor, Fletcher, Robertson and Miss Hunt took part. A vote of thanks to Dr. Clausen for his delightful talk was moved by Mr. Fletcher and carried by acclamation.

NORTH WESTERN M. & C.W. AND S.H.S. SUB-GROUPS

President: Dr. Barbara Knight (Asst. Div. M.O., Lancashire).

Hon. Secretary: Dr. L. Cromack (S.M.O., Manchester).

The February meeting of the sub-groups was held on the 25th in the Public Health Committee Room, Town Hall Annexe, Manchester. The speaker was Dr. A. V. Stocks, M.O.H., Eccles, on "Sonne Dysentery."

The President introduced Dr. Stocks with the remark that no introduction was necessary, and that we were particularly honoured in having as our speaker, the President of the North Western Branch. Dr. Stocks then introduced his subject by giving a brief history and by referring to the three types and methods of spread. As far as he was aware, the only mechanical carrier, other than flies, was the dog, which could be affected.

Sonne dysentery was very prevalent in this country, particularly in 1952, but the number was less in 1953. The age group predominantly affected was 0-4 years, which produced 48 per cent. of notified cases. Four counties provided half the total—West Riding, London, Middlesex and Lancashire. Liverpool was the worst city and Manchester the fourth. The condition was prevalent in nurseries and schools, and in industrial nurseries. It was a difficult subject to investigate in a small health area where the staff was limited.

Public health action was necessary in nurseries and schools or to remove the infected cases early, but some children are symptomless and can cause a spread. It was essential to get a specimen of the first case if possible sent quickly to the laboratory and then if this was positive, other children and the staff would have laboratory investigation. This was particularly important in the case of food handlers such as kitchen staff. In view of the possible infection outside school, it is obviously desirable to insist on the quarantine of positive cases at home, and here the co-operation of general practitioners was essential and well worth while.

In treatment, the prophylactic use of sulpha drugs was recommended, *e.g.,* succinal sulphathiozole tablets, three times a day for a week. The Ministry of Health memorandum recommended that it was advisable to test sensitivity to the sulpha drugs before prescribing. The speaker expressed doubt as to the wisdom or value of this procedure.

Any similar drugs could be used, although it had been found that resistant strains soon developed and treatment should not be prolonged. Aural streptomycin in 10 days if necessary was an alternative.

An interesting discussion followed led by the President. A vote of thanks was heartily applauded.

Joint Meeting with North Western Branch

A joint meeting of the North Western Branch and the above Sub-Groups was held in the Public Health Committee Room, Town Hall Annexe, Manchester, on Friday, March 11th, 1955.

Dr. J. A. Gillet, Medical Officer of Health, Rotherham, gave a talk, illustrated by a film strip, on the Rotherham experiment, "The Domiciliary Nursing of the Sick Child." He said that it was now considered that the mother's presence with the sick child was a very desirable factor in the treatment. Even the ignorant mothers were very helpful with sick children, more especially the younger ones. A sick child felt a great need for its mother, and no doubt her presence aided the child's progress towards recovery. This had been tried by Spence in a terrace of houses and proved successful.

An important factor was the pyschological ill effect of a child's separation from its mother which Dr. John Bowlby believed caused psychological damage in a child of two years or less. The film strip of the Rotherham scheme was then shown. This illustrated how the scheme was started—because of gastro-enteritis in hospital amongst cases of pneumonia. Isolation was first practical but without results.

The scheme was first discussed by the M.O.H. with the Health Committee and general practitioners. It was decided that specially selected home nurses would visit the homes, and that simple equipment was all that was necessary. It was considered that District Nurses would be better than hospital ones, but that co-operation with the hospital O.P.s and paediatricians was essential. Equipment, consisting of clothes, a treasure cot, and a special tin (for a case such as gastro-enteritis) containing equipment was deposited at the house for the nurse to use. Other equipment was stored in selected cupboards in the home. If a case was reported by the health visitor, the general practitioner was notified, and the nurse visited and acted under the G.P.'s direction.

Detailed reports of the case and its progress were given to the Superintendent School Nurse, who might visit, too, if the nurse was worried. The mother took over the care of the child during the latter stages of disease and convalescence. The ordinary dressings were done in the home—penicillin injections being prepared out of sight in the kitchen.

If the parents were anxious, they might ring the Superintendent of Nurses' Home, at night it necessary, and she would visit. A late evening round was made and the general practitioner notified and given a last report by telephone at 10 p.m.

After the child had recovered, the equipment was sent back to the Nurses' Home where it was sterilised. The Home Nurse Superintendent then handed on the records to the Health Visitor Superintendent.

The yearly figures showed a marked reduction in gastro-enteritis and in the infant mortality rate. The scheme had had a marked psychological effect and taught many parents how to care for a sick child with an infectious disease, bronchitis, pneumonia or other conditions.

Dr. Bennett wanted to know how the scheme had affected admissions to children's hospital and it was stated that admissions had been materially reduced.

The scheme covered the nursing of all types of school children excluding surgical cases.

Dr. Jenkins enquired the age range covered and was told it was up to 15 years. Many general practitioners like to treat their own cases and welcomed the scheme. It was, however, pointed out that very few mothers were gainfully employed in Rotherham and this was responsible to no small extent for the success of the scheme. Twenty-five district nurses were needed to cover the population of 82,000.

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